

**VALLEY BRANCH WATERSHED DISTRICT
RULES AND REGULATIONS
January 25, 2007**

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FORWARD

Introduction

This forward summarizes the reasoning behind the proposed Valley Branch Watershed District (VBWD) Rules and Regulations (Rules). The forward discusses

- the process for developing the Rules,
- the authority allowing VBWD to develop and adopt the Rules,
- the need for the Rules, and
- the justification for the Rules.

The organization of the Rules is also described.

Rule-Making Process

These Rules are an update and revision from the VBWD's 1996 Rules. On November 10, 2005, the VBWD Board of Managers adopted the 2005-2015 VBWD Watershed Management Plan (Plan). The Plan called for the revision of the VBWD Rules to incorporate volume control standards, revise the wetland regulations, and update the Rules in general.

In December 2005, the VBWD staff began to identify stakeholders and prepare draft Rules needed to address the issues discussed in the 2005-2015 VBWD Plan. The VBWD Managers reviewed and revised the draft Rules before VBWD staff sent the draft Rules to various stakeholders for input.

Comments on the draft rules were received in the summer of 2006. The VBWD Managers reviewed those comments, prepared responses, and in some cases, revised the Rules. In November 2006, the VBWD Managers sent the proposed Rules to the Board of Water and Soil Resources and all public transportation authorities that have jurisdiction within the VBWD, as required in Minnesota Statute 103D.341, Subd. 2. In addition, the proposed Rules were sent to the stakeholders previously requested to comment. Responses to the previously-received comments were sent with the proposed Rules.

As required in Minnesota Statute 103D.341, Subd. 2, the VBWD Managers published notice of a public hearing on the proposed rules. The public hearing was held on January 25, 2007 at 8 p.m. After the public hearing and later that evening, the VBWD Managers adopted these rules.

These rules will be published in the VBWD's legal newspapers. The managers will provide written notice of adopted or amended rules to public transportation authorities that have jurisdiction within the watershed district. The managers will also file these adopted rules with the county recorder of each county affected by the watershed district and the Minnesota Board of Water and Soil Resources.

Authority

State law (Minnesota Statutes 103B and 103D and Minnesota Rules 8410) requires watershed districts to prepare and adopt watershed management plans. These plans must be the basis for watershed district Rules. Minnesota Statutes (103D, 103B, and 103G) and Minnesota Rules (8410 and 8420) give watershed districts the authority to develop and implement rules and regulations. The VBWD's authority to adopt these Rules allows it to establish standards, requirements, and procedures for the review and approval or disapproval of activities within its mandated authority.

Need

The lakes, ponds, streams, wetlands, and groundwater in the VBWD are important assets. These resources supply recreational and aesthetic benefits, enhance property values, serve as sources for groundwater recharge and drinking water, provide nutrient removal, and provide wildlife habitat and fishery resources. The high quality of the VBWD's natural resources makes it an attractive place for people to live. If water quality becomes degraded, a water resource will lose its value. If water quality is not maintained, it is not just the environment that will suffer, but the commercial and recreational value of our water resources will diminish and public health may be compromised. Preserving the high quality of the VBWD's natural resources is critical to the existence of a high quality of life among the citizens residing in the watershed and in the larger metropolitan region.

The quality of lakes, ponds, streams, wetlands, and groundwater are closely linked to the surrounding environment and land use. The quality of these water resources is dependent on the watershed's hydrology and the physical conditions of the resource. Hydrology is dependent on the weather, the topography of the landscape, the soils, the land cover, and other factors. Changes to any of these factors will influence the water quality of a water resource. While some of the factors are difficult to control, changes to land cover can be regulated.

To accomplish the VBWD goals of protecting water resources and preventing negative consequences, the VBWD will manage stormwater runoff, erosion and sedimentation, wetlands and vegetative buffers through enforcing these Rules.

Justification

The quality and quantity of water in a water body is greatly influenced by stormwater runoff. Stormwater runoff carries pollutants that cause adverse environmental impacts to the VBWD's water resources. As development in the VBWD increases, more and more land will be converted into impervious surfaces, such as buildings/rooftops, driveways, sidewalks, roads, and parking lots. These surfaces cannot absorb stormwater (cannot infiltrate), which means that as runoff flows over these surfaces, it picks up pollutants and gains speed and volume. When compared to land with less impervious surfaces, these stormwater flows contain more pollutants, are a higher temperature, move at a faster rate, and contain more volume. The downstream impacts of such flows include water quality degradation, increased erosion and sedimentation, increased flooding, wetland habitat degradation, and negative groundwater effects.

Human activities (especially construction and the removal of vegetation) often accelerate the natural process of erosion and sedimentation. For example, when a construction site is cleared and graded, stormwater runoff rates and volumes increase because there is less infiltration, less interception, fewer natural depressions, and compacted soil. This results in increased erosion, sedimentation, and decreased infiltration. Increased soil erosion releases significant amounts of sediment that may enter receiving lakes, streams, ponds, and wetlands. Sediment deposition decreases water depth, degrades water quality, smothers fish and wildlife habitat, and degrades aesthetics. Sedimentation can also cause flooding when it blocks portions of the stormwater system. Suspended sediment clouds water resources and disturbs aquatic habitats.

Sediment is also a major source of phosphorus. Scientific studies show that phosphorus is usually the nutrient that limits algal growth in freshwaters. Reducing phosphorus in a lake, therefore, is required to reduce algal abundance and improve water transparency. Failure to reduce phosphorus concentrations will allow the water body to degrade at an unnatural, accelerated rate.

Human activities can affect the amount of water in water bodies. When too much water enters lakes, ponds, wetlands, and streams, they exceed their storage or conveyance capacity and flood. Flooding has the potential for causing severe damage and great property loss. Past and potential future impacts of flooding in the watershed include damage to structures, utilities and transportation facilities, flood

fighting costs, post-flood cleanup costs, business losses, increased expenses for normal operating and living during a flood situation, and benefits paid to owners of flood insurance. Other losses that could be suffered during flooding include a loss of life, disruption of normal activities, potential health hazards from contaminated water supplies, dislodged fuel storage tanks, and flooding of wastewater collection and treatment facilities. Without controls, increased urbanization of a watershed will cause average annual flood damages to increase.

Conversely, a lack of water can have negative effects on water resources. Maintaining an adequate amount of water is important for human enjoyment of the water resources, and for maintaining wildlife habitat and fishery resources.

Human activities can negatively impact wetlands. Excavation, filling, and activities that change the hydrology and the quality of the stormwater flowing into the wetlands can destroy the wetland functions and values. Wetlands come in many different shapes, sizes, and types, and perform a variety of physical, chemical, and ecological functions. A healthy watershed is one in which wetlands are an integral part of the ecosystem.

Groundwater quality and quantity is closely linked to the surface environment. Because most VBWD residents obtain their drinking water from groundwater, it is especially important to ensure that these aquifers are uncontaminated, protected from future contamination and provide adequate supplies. Several VBWD water bodies are groundwater-dependent and need an adequate supply of clean groundwater to maintain water levels and sustain their natural habitats. Maintaining a clean, safe groundwater supply is critical to human and environmental health and to the economic and social vitality of our communities. Groundwater can be contaminated by a number of human activities. When groundwater contamination occurs, water suppliers (public and private) experience added financial and social costs to manage the affected water supply.

Organization

The proposed VBWD Rules are split into 17 Rules. In general, they follow the suggested format of Washington County's 2003 report, "Comparative Review of Watershed District Rules and Recommendations for Standardization." However, some Rules were grouped together because the VBWD policies and standards are too inter-related to separate. In addition, some Rule titles are listed, but the VBWD has no specific policy or standard for that topic.

GENERAL

Purposes

Policies

1. To implement the purposes for which the Valley Branch Watershed District (VBWD) was created.
2. To carry out the vision and mission contained in the VBWD Watershed Management Plan, which are

VBWD Vision:

Always be careful stewards of the water resources within our watershed boundaries.

VBWD Mission:

To manage and protect our water resources: lakes, ponds, creeks, streams, wetlands, drainages, and groundwater by:

- A. Promoting open communication with our constituents, both our citizen base and pertinent governmental units.*
 - B. Improving and protecting the quality of water for all water bodies within the VBWD.*
 - C. Managing the quantity of water and minimizing the negative impact on the VBWD from floods, high flows, and droughts by providing public works projects and other prudent measures.*
 - D. Understanding the effects of community growth and other activities on groundwater, initially focusing on the groundwater-surface water interface.*
 - E. Continuing to enforce the Wetland Conservation Act requirements as the responsible local unit of government¹.*
 - F. Educating our constituents and the local units of government within the VBWD on water quality and quantity issues, management, and means of improvement.*
3. To carry out the policies contained in the VBWD Watershed Management Plan.
 4. To coordinate the VBWD's activities with other governmental agencies.
 5. To ensure that the water resources are considered, protected and preserved within the VBWD.
 6. To ensure that future regional water management needs are considered in the development of individual subdivisions and other developments and local water management plans.
 7. To protect the public health, safety and welfare.

Purpose of Standards

1. To aid the Managers in their review process.
2. To provide the Managers' staff with the criteria to be used for their reviews and recommendations.

¹ The Local Government Unit (LGU) on state land is the agency with administrative responsibility for the land.

3. To inform permit applicants of the criteria against which their proposed developments will be reviewed.
4. To provide the communities with guidelines for the development of local water management plans.

Application

1. General activities that require a VBWD permit:
 - A. Land alterations, such as grading or filling (including re-development projects), which disturb, remove or cover surface vegetation or other surfaces of 1 acre or more,
 - B. All projects which create a new impervious surface area of 6,000 square feet or more,
 - C. All work within the waters and floodplain of the VBWD,
 - D. All projects which result in a discharge of municipal or industrial water or wastewater to a surface water drainage system,
 - E. All subdivisions, plats, and developments,
 - F. All projects which result in lake augmentation,
 - G. All projects which impact a wetland. Note: Valley Branch Watershed District is the Local Governmental Unit (LGU) responsible for administering the Wetland Conservation Act (WCA) within the VBWD, except the LGU responsible for administering the WCA on state land is the agency with responsibility for the land.

General Policies

1. To implement the purposes of these Rules and Regulations, the Managers intend to do the following:
 - A. Assist municipal officials in the preparation of local watershed management plans and land development guides.
 - B. Review permit applications and required supporting documents for activities listed within these Rules and for permit applications filed with the Minnesota Department of Natural Resources pursuant to Minnesota Statutes Chapter 103G. The Managers desire to become informed of improvements and land development proposals during the early planning stages. It is the intent of the Managers that the communities be the primary vehicles for directing developers to submit proposed improvement plans to the VBWD. The VBWD will review proposed improvements when the appropriate community is aware of the improvement proposal.
 - C. Exercise control over proposed developments only to the extent necessary to protect the waters of the VBWD from unreasonable impacts which are inconsistent with the policies contained in the Watershed Management Plan and these Rules.
 - D. Submit to the communities the VBWD comments, recommendations, requirements and all VBWD actions regarding proposed improvements. All VBWD requirements shall be included in the community permits.
 - E. Coordinate the VBWD review with the communities and, when appropriate, with Counties, Minnesota Department of Natural Resources, Minnesota Pollution Control Agency and other appropriate local, State, and Federal agencies.

2. All permits issued by the VBWD shall remain valid unless: (1) the work is not initiated within one year of permit issuance, (2) work is idle for 12 consecutive months, or (3) work is not completed within 3 years of permit issuance date.

Key Definitions and Acronyms

For the purposes of these Rules, the following words have the meanings set forth below. References in these Rules to specific sections of the Minnesota Statutes include any amendments, revisions or recodification of those sections.

Agricultural activity – the use of land for the production of agronomic, horticultural or silvicultural crops, including nursery stock, sod, fruits, vegetables, flowers, forages, cover crops, grains, and Christmas trees. Agricultural activity also includes grazing.

Bank Application Form – a wetland bank application form available from the Minnesota Board of Water and Soil Resources (BWSR).

Best management practices (BMPs) – measures taken to minimize the negative effects on the environment. BMP guidance is documented in *Protecting Water Quality in Urban Areas* (MPCA, 2000), *Metropolitan Council Urban Small Sites Best Management Practices Guidebook* (Metropolitan Council & Barr Engineering Company, 2001) and *Minnesota Stormwater Manual* (MPCA, 2005).

Board of Managers or Managers – the Board of Managers of the Valley Branch Watershed District.

BWSR – Minnesota Board of Water and Soil Resources.

Complete Permit Application – a complete and signed VBWD permit application form; the VBWD permit fee; a Runoff Water Management Plan showing the features and information required by the Watershed Management Plan and these Rules; computations, agreements and documentation required by these Rules; a wetland delineation report or documentation prepared by a wetland scientist indicating there is no wetland on the site; all necessary wetland forms and information; and an erosion control plan.

CWPA – Combined Wetland Permit Application

Criteria – specific details, methods and specifications that apply to all permits and reviews and that guide implementation of the VBWD’s goals and policies.

Day or Days – working days when used in a time period of 15 days or less and calendar days when used in a time period greater than 15 days. The day of the event shall not be used in counting any time period.

Development - any proposal to subdivide land, any land disturbing activity, redevelopment affecting land, or creation of impervious surface including, but not limited to, road construction or reconstruction or improvement and construction or reconstruction of stormwater conveyance systems.

Developed Site – see Ultimate Development.

Drainage System – those features of the watershed such as lakes, ponds, streams, and waterways which contain and convey waters of the VBWD.

Drainage way or waterway – any natural or artificial channel which provides a course for water flowing either continuously or intermittently.

DNR – Minnesota Department of Natural Resources.

Excavation – the displacement or removal of soil or other material.

Existing Conditions – current conditions of the site.

Feasible – technically achievable at a cost, in the VBWD’s determination, not substantially disproportionate to the stormwater management benefit to be gained.

Floodplain – the area adjoining a watercourse, or natural or constructed water basin, including the area around lakes, wetlands, stormwater ponds, lowlands, and intermittent and perennial streams that is inundated by the 100-year 24-hour rainfall event, the 10-day 100-year snowmelt event, or as calculated using the VBWD’s simplified method for landlocked basins. See Rule 5, 6, 7, 8.

Flowage Easement – an easement held in public ownership to reserve areas along waterways and around storage sites and around or along other parts of the drainage systems for the passage or retention of waters, construction of drainage improvements, and maintenance.

Hydrologic Soil Group – a term used in soil surveys that refers to soils grouped according to their runoff-producing characteristics. The chief consideration is the inherent capacity of bare soil to permit infiltration. The slope and the kind of plant cover are not considered, but are separate factors used in predicting runoff. Soils are assigned to four groups (Groups A, B, C, and D). Group A soils have a high infiltration rate when thoroughly wet and have a low runoff potential. They are mainly deep, well drained, and sandy or gravelly. Group D soils, at the other extreme, have a very slow infiltration rate and thus a high runoff potential. They have a claypan or clay layer at or near the surface, have a permanent high water table, or are shallow over nearly impervious bedrock or other material. A soil is assigned to two hydrologic groups if part of the acreage is artificially drained and part is undrained. See the *Soil Survey of Washington and Ramsey Counties*.

Impervious surface – a surface that has been compacted or covered with a layer of non-porous material (including buildings/structures), or is likely to become compacted from expected use, so that it is highly resistant to infiltration by water.

Lake Edith Watershed – all land that ultimately drains to Lake Edith, including areas that are typically landlocked, but would overflow to Lake Edith.

LGU – Local Government Unit

Local Watershed Management Plan – a comprehensive local water management plan pursuant to Minnesota Statutes, sections 103B.235.

Minimum Building Elevation – the elevation of the lowest floor of the building.

MNRAM 3.0 – *Minnesota Routine Assessment Method for Evaluating Wetland Functions, Version 3.0* (MNRAM 3.0) or updated versions.

MPCA – Minnesota Pollution Control Agency.

Municipality – any city or township wholly or partly within the Valley Branch Watershed District.

Normal Water Elevation – the long-term average water level.

Notice of Decision – Notice of Wetland Conservation Act decision, a completed form provided by BWSR or similar.

NPDES – National Pollutant Discharge Elimination System, a federal stormwater regulation program administered by the MPCA.

NPDES Construction Stormwater Permit – a permit program administered by the MPCA (incorporates by reference Minnesota Rules 7090.0060), which is officially called *General Permit Authorization To Discharge Storm Water Associated With Construction Activity Under The National Pollutant Discharge Elimination System/State Disposal System Permit Program*.

Ordinary High Water level (OHW) – an elevation associated with a water body determined by the DNR, and used to determine DNR jurisdiction. In general, it is the elevation delineating the highest water level which has been maintained for a sufficient period of time to leave evidence upon the landscape. The ordinary high water level is commonly that point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. For watercourses, the OHW is typically the elevation of the top of bank of the channel. The OHW does not correlate to a 100-year, 50-year, 10-year, or any other flood level.

Parcel – any area of land capable of being described with such definiteness that its location and boundaries may be established.

Person – an individual, firm, partnership, association, corporation, limited liability company, municipal corporation, city, village, county, town, school district, state agency, or other political subdivision of the State of Minnesota.

Plats – maps of a subdivision showing the location and boundaries of individual parcels of land subdivided into lots, with streets, easements, etc., drawn to a scale.

Proposed Conditions – see Ultimate Conditions.

Public health, safety, and welfare – extends to and includes any act or thing tending to improve or benefit or in any way affect the general public either as a whole or as to a particular community or part thereof. This definition is to be construed liberally to give meaning and effect to the goals and purposes of the Valley Branch Watershed District and also statutes and ordinances relating to floodplain management and shoreland use.

Rate of Runoff – the amount of runoff per unit of time for a given storm event, often expressed as cubic feet per second (cfs).

Reconstruction – the rebuilding, repair or alteration of a structure, surface, or facility.

Rules – the Rules and Regulations of the Valley Branch Watershed District.

Runoff – the amount of excess precipitation or snowmelt that is not permanently stored in depressional areas or infiltrated into the soil.

SCS – Soil Conservation Service, now called the Natural Resource Conservation Service (NRCS).

SDS – State Disposal System.

Sequencing – the process of demonstrating that a proposed wetland activity will comply with the principles of the Wetland Conservation Act. The process is called sequencing because there is a specific order of priorities in the Wetland Conservation Act. See Minnesota Rules 8420.0520.

Standards – a preferred or desired level of quantity, quality, or value.

Storage site – an area which is reserved for holding water.

Stream – perennial (streams that flow throughout the year, such as portions of Valley Creek) and intermittent streams (streams that flow during/after a snowmelt or rain event). Longer intermittent streams are identified in Section 4.3.5 of the Watershed Management Plan.

Structure – anything that is constructed or placed on the ground and that is intended to remain for longer than a brief, temporary period of time.

Subdivision, subdivide – the separation of an area, parcel, or tract of land under single ownership into two or more parcels, tracts, lots.

Surface Water Drainage System – those natural or artificial features of the watershed such as lakes, ponds, wetlands, streams, waterways, and storage sites which contain and convey and/or manage waters of the VBWD.

TEP – Technical Evaluation Panel.

Ultimate Development – the level of development as proposed in a permit application and/or the future development as proposed in a city, township, or county comprehensive land use plan.

Valley Creek Watershed – all land that ultimately drains to Valley Creek, including areas that are typically landlocked, but would overflow to Valley Creek.

VBWD – Valley Branch Watershed District

Vegetative Buffers - zones of undisturbed vegetation, preferably native vegetation, adjacent to lakes, streams, and wetlands.

Volume of runoff – the amount of stormwater runoff in cubic units, often noted as acre-feet.

Watercourse - a channel that has definable beds and banks capable of conducting confined runoff from adjacent land.

Waters – a watercourse or a natural or constructed water basin, including the area around lakes, wetlands, stormwater ponds, lowlands, and intermittent and perennial streams

Watershed – an area bounded peripherally by a drainage divide, which collects precipitation and contributes runoff to a particular drainage system.

Watershed Management Plan – the VBWD’s 2005-2015 Watershed Management Plan or as amended, revised, updated, replaced or superseded.

WCA – Wetland Conservation Act.

WCA Rules – Minnesota Board of Water and Soil Resources (BWSR) Minnesota Rules Chapter 8420, as amended.

Wetland – any area identified as a wetland under Minnesota Statutes section 103G.005, subdivision 19.

Wetland Conservation Act – The Minnesota Wetland Conservation Act of 1991, (Minnesota Laws 1991, chapter 354, and subsequent amendments).

Wetland Functions – a process or series of processes that take place within a wetland. These include the storage of water, transformation of nutrients, growth of living matter, and diversity of wetland plants, and they have value for the wetland itself, for surrounding ecosystems, and for people. Functions are typically grouped broadly as habitat, hydrologic, or water quality.

Wetland Impact – a measurable or predictable change to the wetland’s size, quality, or biological diversity.

Wetland Replacement Plan – A plan conforming to Minnesota Rules 8420 for replacing wetland values where avoidance of activity is not feasible and prudent.

Wetland Values - the benefits wetland functions provide to people.

RULE 1: ADMINISTRATIVE PROCEDURES

Required Submittals and Exhibits

The VBWD requires submittals for all projects within the VBWD that require a VBWD permit. The submittals must accompany the permit application and must show how the project conforms to the requirements in these Rules and Regulations and the VBWD Watershed Management Plan.

The following submittals and exhibits must be submitted for all projects within the VBWD that require a VBWD permit:

1. A completed and signed permit application form.
2. The deed of ownership for the project site.
3. The required permit application fee (see Rule 12).
4. Grading Plan/Mapping Exhibits:

One 11-inch by 17-inch copy and two full-sized copies of the plans shall be submitted. The plans shall be prepared by a registered professional engineer and shall include the following:

- A. Property lines and delineation of lands under ownership of the applicant.
- B. Delineation of the subwatersheds contributing runoff from off-site, proposed and existing on-site subwatersheds, and flow directions/patterns.
- C. Location, alignment and elevation of proposed and existing stormwater facilities.
- D. Delineation of existing on-site wetlands, shoreland and/or floodplain areas (including any buffers).
- E. Existing and proposed normal water elevations and the critical (the highest) water level produced from the 100-year 24-hour storms, the 100-year 10-day snowmelt event, or the VBWD simplified method for landlocked basins or an approved alternative for all on-site wetlands, ponds, depressions, lakes, streams and creeks (see Rule 5, 6, 7, 8).
- F. Ordinary High Water (OHW) elevations, as determined by the DNR (if applicable).
- G. Existing and proposed site contour elevations related to NGVD, 1929 datum.
- H. Drainage easements covering land adjacent to ponding areas, wetlands and waterways up to their 100-year flood levels and covering all ditches and storm sewers. Access easements to these drainage easements and to other stormwater management facilities shall also be shown.
- I. Minimum building elevation for each lot.
- J. Identification of downstream water body.

5. Hydrologic/Hydraulic Design Exhibits:

One copy of the following shall be submitted. The calculations shall be prepared by a registered professional engineer.

- A. All hydrologic and hydraulic computations completed to design the proposed stormwater management facilities shall be submitted. Model summaries must be submitted. The summaries shall include a map that corresponds to the drainage areas in the model and all other information used to develop the model.
- B. A table (or tables) must be submitted showing the following:

- i. A listing of all points where runoff leaves the site and the existing and proposed stormwater runoff rates and volumes.
 - ii. A listing of the normal water levels under existing and proposed conditions and the water levels produced from the storm and runoff events listed above for all on-site wetlands, ponds, depressions, lakes, streams and creeks.
 - C. A completed VBWD stormwater volume reduction checklist (see Rule 2 and Appendix A).
6. Erosion Control and Sedimentation Prevention Exhibits (see Rule 3):
- A. One 11 inch by 17 inch copy and two full-sized plans which show how waterborne sediment will be prevented from leaving the site during and after construction to prevent sedimentation of downstream water bodies. The plans shall include a construction sequencing schedule.
 - B. A copy of the Stormwater Pollution Prevention Plan (SWPPP), prepared by a qualified individual, which conforms to the MPCA's NPDES Construction Stormwater Permit requirements. The NPDES permit requirements cover both temporary and permanent erosion prevention and sediment control measures, and apply to all construction projects that disturb one or more acres of land. The SWPPP must conform to the special requirements for "Special Waters" (Valley Creek and the St. Croix River), when applicable. The SWPPP shall also show how erosion will be prevented during construction on individual building sites. Any applicable local standards shall be incorporated into the plan.
7. Construction plans for all proposed stormwater management facilities. Construction specifications must be provided upon request.
8. A maintenance agreement in the format of Appendix B, as revised and updated by the VBWD Attorney.
9. Four copies of the Wetland Delineation Report, which also must include a summary of the MnRAM evaluation (*Minnesota Routine Assessment Method for Evaluating Wetland Functions, Version 3.0* or updated versions), and classification determination according to VBWD's wetland management classification system (see Rule 4).
10. Five copies of Part 1 of the Combined Wetland Permit Application (CWPA) for all projects proposing to alter wetlands, which may not require wetland replacement (see Rule 4).
11. Five copies of the *Wetland Replacement Plan, including Parts 1 and 2 of the CWPA*, for all projects requiring wetland replacement (see Rule 4).
12. Other exhibits required by or to show conformance to these Rules and Regulations.

Permit Application Process

- 1. The VBWD Engineer must receive from the applicant a complete permit application, all necessary supporting documents, and the permit application fee 14 calendar days prior to a meeting at which application is to be considered. Supporting documentation must include the deed of ownership for the project site. If the permit applicant does not yet own the property, a preliminary VBWD permit can issued, but will not be effective until the VBWD receives the proof that the permit applicant owns the property.
- 2. The VBWD Engineer will review each permit request with respect to VBWD policies and criteria.

3. The VBWD Engineer will notify the applicant concerning
 - A. Applicable VBWD criteria and policies.
 - B. Additional required information where necessary with copies to the appropriate community and other concerned agencies
4. The VBWD Engineer will place the development proposal on the agenda when all the required information is received and all VBWD policies are met or a variance is requested and supporting written documentation is submitted. The Engineer will then submit a written report to the Managers at least two (2) days prior to the Managers meeting.
5. The issuance or denial of a permit shall be based on the policies contained in the Watershed Management Plan and these Rules and Regulations.
6. The Managers will act on a complete permit application within 60 days of receipt or as required by the Rules of the Wetland Conservation Act.
7. The granting of a VBWD permit in no way purports to permit acts which may be prohibited by other governmental agencies.
8. The required surety (see Rule 14) must be submitted prior to the commencement of any permitted activities.

Enforcement and Severability

1. The VBWD may exercise all powers conferred upon it by Minnesota Statutes, Chapter 103, in enforcing these Rules and Regulations.
2. If for any reason a section or subdivision of these Rules and Regulations should be held invalid, such decision shall not affect the validity of the remaining Rules and Regulations.
3. These Rules and Regulations shall conform to Minnesota law and if inconsistent therewith, the latter shall govern and these Rules and Regulations are amended accordingly.

Appellate Procedure and Review

1. Any person aggrieved by enforcement of these Rules and Regulations or by any Order of the VBWD may appeal therefrom in accordance with the appellate procedure and review as provided in Minnesota Statutes Chapter 103D.

Amendment Procedure

1. Any person may petition the Managers for the purpose of amending or changing these Rules and Regulations.
2. The Managers may initiate changes or amendments to these Rules and Regulations.
3. All changes and amendments to these Rules and Regulations, whether initiated by the Managers or by any other person, will require a majority vote of the Managers.

Permit Close-Out

1. The Managers will certify completion of a permitted project or element of the project and authorize the release of any required security upon inspection and submittal of information verifying completion of that project or an element of that project in accordance with the approved plans and conditions of the permit. For consideration of permit close-out, the permit holder must at least 14 calendar days prior to a meeting at which completion is to be considered, provide proof that all required documents have been recorded (including but not limited to easements) and must provide as-built drawings. For consideration of completion

of an element of a project (partial completion), the permit holder must provide documented proof that all components of the completed project are built according to the approved plan, which may include recording of documents (including but not limited to easements) and as-built drawings.

A. The as-built drawings must include:

- i. the surveyed bottom elevations, water levels, and general topography of all basins;
- ii. the size, type, and surveyed invert elevations of all pond outlets;
- iii. the surveyed elevations of all pond, street, and other emergency overflows; and
- iv. other important features to show that the project was constructed as approved by the Managers and protects the public health, welfare, and safety.

B. Additionally, the as-built drawings must show:

- i. the surveyed minimum floor elevations of constructed structures;
- ii. the required minimum floor elevations for all lots and un-built structures; and
- iii. the locations and elevations of septic systems, if they have been constructed.

All surveys must be certified by a registered land surveyor. The Managers will not release the permit holder's remaining fee and performance bond or other security until all of information is submitted, all temporary erosion prevention and sediment controls (such as silt fence) are removed, and stormwater ponds and pipes are free of sediment. No activity will be certified as complete if there are any unpaid fees or other outstanding permit violations.

RULE 2: STORMWATER MANAGEMENT

Policies

1. To carry out the responsibility of managing the VBWD's water resources and to implement the goals and policies of the VBWD's Watershed Management Plan, the Managers must be informed of all water and wastewater discharges within the VBWD. This includes stormwater runoff, municipal and industrial wastewater discharges, lake augmentation, and any discharge that requires a National Pollutant Discharge Elimination Program (NPDES) permit.
2. All discharges and related improvements must conform to the applicable requirements of State and Federal agencies including, but not limited to, Minnesota Rules Chapter 8410, MPCA stormwater permit requirements, and DNR permit requirements.
3. All stormwater discharges must be in general conformance with the VBWD's Watershed Management Plan and local watershed management plans.
4. All discharges and related improvements shall not unreasonably raise water levels or degrade the water quality of the waters of the VBWD.
5. Rate Control: Stormwater and snowmelt runoff rates will be managed so that future peak rates of runoff crossing community boundaries and/or leaving a development are below or equal to existing rates.
6. Volume Control: Stormwater volume will be controlled so that surface water and groundwater quantity and quality are protected.

7. Water Quality:
 - A. All stormwater runoff will be treated at the time of development.
 - B. Developers are encouraged to try new and innovative stormwater management techniques.
 - C. The VBWD will work with local government units to adopt/revise ordinances to allow for runoff pollution prevention methods (e.g., narrower streets, smaller parking lots).
 - D. Projects and development plans will be reviewed to evaluate compliance with VBWD standards.
 - E. Other public agencies will be required to conform to VBWD stormwater quality requirements.
 - F. Local watershed management plans will be reviewed for compliance with the VBWD Watershed Management Plan.
8. Submittals will be required for VBWD-permitted projects that must show how the project will meet VBWD requirements for stormwater quality treatment, stormwater rate and volume management, and erosion control.

Standards

1. Any permitted activity shall meet the management policies, standards, and criteria set forth in the VBWD Watershed Management Plan.
2. The permit applicant must comply with the requirements of the NPDES Construction Stormwater Permit. For trout streams (projects within the Lake Edith and Valley Creek watersheds), these requirements include temperature control measures ranging from minimizing impervious surfaces (most preferred) to special pond designs.
3. The permit applicant shall complete analyses of stormwater runoff volumes and rates, and flood levels for existing and proposed conditions. Analyses must include the 2-year, 10-year, and 100-year 24-hour storms with Soil Conservation Service (SCS) Type II time distribution; the 100-year 10-day snowmelt event; and the VBWD simplified method for landlocked basins (or an approved alternative). Section 4.5 of the VBWD Plan and Rule 7 provides more information about the VBWD simplified method and floodplain management requirements for permit review in general.
4. The following computer programs will be accepted: HydroCAD, XP-SWMM, and TR-20. Other programs may be accepted, but the permit applicant must inquire prior to submitting the computations. Reservoir routing procedures and critical duration runoff events shall be used for design of detention basins and outlets.
5. The peak rate of stormwater runoff from the developed site shall not exceed the existing peak rate of runoff for all critical duration events, up to and including the 100-year return frequency storm event for all points where discharges leave a site during all phases of development. Design criteria shall be the 2-, 10-, and 100-year 24-hour storms with SCS Type II time distribution and the 100-year 10-day snowmelt event. The runoff curve number for existing agriculture areas shall be less than or equal to the developed condition curve number. If storm sewer systems are designed for an event less than a 100-year event, the plans and computer modeling analyses must include secondary overflows for events exceeding the storm sewer systems level-of-service up through the critical 100-year event.

6. The stormwater runoff volume must be controlled. The permit applicant must complete the VBWD’s stormwater volume checklist (see Appendix A). Sites within the Valley Creek and Lake Edith Watersheds ultimately drain to a trout stream, and must comply with the Minnesota Pollution Control Agency (MPCA) Construction General Permit standards. The VBWD design standards for controlling stormwater runoff volumes are the following:

Sites Outside of Valley Creek and Lake Edith Watersheds	Sites Within the Valley Creek or Lake Edith Watersheds
The greater of:	All of the below:
a. For the 1-inch 24-hour design storm event, the stormwater runoff volume from the developed site shall not exceed the existing runoff volume at all points where discharges leave a site.	a. For the 1-year (2.2-inch) and 2-year (2.9-inch) 24-hour design events, the stormwater runoff volume from the developed site shall not exceed the existing runoff volume at all points where discharges leave a site, and
b. Runoff equal to one half inch from the new impervious surfaces created from the project must be infiltrated.	b. Infiltration systems shall be sufficient to infiltrate a water quality volume of one inch of runoff from the new impervious surfaces created by the project.

Infiltration facilities must drain down within 48 hours, as required by the MPCA Construction Stormwater Permit. The period of inundation is defined by the VBWD as the time the high water level in the facility is above 0.2 feet from the bottom of the facility.

Infiltration facilities should be located in permeable soils and a minimum 3-foot distance is required from the bottom of the practice to the seasonally high water table, bedrock or other impeding layer per the MPCA Construction Stormwater Permit.

Infiltration facilities must conform to the minimum setbacks required by the Minnesota Department of Health, as summarized below:

Setback From	Minimum Distance (feet)
Property Line	10
Building Foundation (with slopes directed away from building)	10
Private Well and Public Water Well	50
Septic System Tank/Leach Field	35

For an infiltration facility with a tributary area of two acres and less, and with less than 0.7 acres of impervious surfaces, at least 50% of the in-flow volume from impervious surfaces must be pre-treated prior to entering the feature. Pre-treatment can consist of vegetative swales, filter strips, sediment forebays/traps, grit chambers or other measures.

For an infiltration facility with a tributary area of greater than two acres or 0.7 acres or more of impervious surfaces, 100% of the in-flow volume from impervious surfaces must be pre-treated prior to entering the feature. Pre-treatment for these facilities must be designed to remove at least 25% of the inflow sediment loads.

For proposed infiltration facilities with drainage areas of two acres or more or with 0.7 acres or more of impervious surfaces, a soil boring will be required. The soil boring will be required to go to a depth of at least five feet below the proposed bottom of the infiltration facility. If fractured bedrock is suspected, the soil boring should go to a depth of at least ten feet below the proposed bottom of the infiltration facility. The soils will be classified using the Unified Soil Classification system. The least permeable soils horizon will dictate the infiltration rate.

The permit applicants are encouraged to make detailed analyses and accurately determine the infiltration rates of the proposed infiltration facility. However, in the absence of a detailed analysis, the VBWD Engineer’s recommendations and requirements shall be based upon the following rates:

Proposed Infiltration Facility with Drainage Area Less than 2 Acres And Less than 0.7 Acres of Impervious Surfaces		Proposed Infiltration Facility with Drainage Area 2 Acres or More Or 0.7 Acres or More of Impervious Surfaces	
Hydrologic Soil Group Based on Soil Survey	Infiltration Rate (inches/hour)	Unified Soil Classification	Infiltration Rate (inches/hour)
A	0.8	GW, GP, SW	1.6
B	0.3	SP	0.8
C	0.2	GMd ² , SMd ²	0.5
D	Infiltration not feasible. See Footnote 1.	All Others	Infiltration not feasible or unlikely to be successful without soil corrections. See Footnote 1.

¹ The permit applicant needs to make soil corrections and/or investigate other locations on the site for feasible infiltration locations. If the applicant claims that infiltration is not feasible on-site, the applicant must provide supporting documentation to the VBWD. If the VBWD agrees that infiltration is not feasible, the applicant shall design alternative stormwater runoff treatment method, which includes, but is not limited to, off-site infiltration and on-site wet detention. For sites outside of the Valley Creek and Lake Edith watersheds, see Standard 7.

² GM and SM soils should be grouped by subdivisions of d and u. Subdivision is on the basis of the Atterberg limits; suffix d (e.g. GMd) is used when the liquid limit is 25 or less and the plasticity index is 5 or less; the suffix u is used otherwise.

An infiltration facility must be designed so that volumes in excess of the design volume are safely conveyed into the downstream stormwater system.

To prevent soil compaction, the proposed infiltration facility must be staked off and marked during construction to prevent heavy equipment and traffic from traveling over it. If infiltration facilities are in-place during construction activities, sediment and runoff must be kept away the facility, using practices such as diversion berms and vegetating around the facility’s perimeter. Infiltration facilities must not be excavated to final grade until the contributing drainage area has been constructed and fully stabilized. The final phase of excavation should remove all accumulated sediment and be done by light tracked equipment to avoid compaction of the basin floor. To provide a well-aerated, highly porous surface, the soils of the basin floor should be loosened to a depth of at least 24 inches to a maximum

compaction of 85% standard proctor density prior to planting. The upper 10 inches of soil should also be tilled prior to planting.

7. For sites outside of the Valley Creek and Lake Edith Watersheds, where infiltration facilities are not feasible, the following water quality treatment design criteria are required:
 - A. A permanent pool volume (“dead storage”) below the principal spillway (normal outlet) shall be provided that is greater than or equal to the runoff from a 2.5-inch 24-hour storm over the entire contributing drainage area, assuming full development.
 - B. A permanent pool average depth (basin volume/basin area) shall be ≥ 4 feet, with a maximum depth of ≤ 10 feet.
 - C. An emergency spillway (emergency outlet) that is adequate to safely pass the 100-year frequency, critical-duration rainfall or runoff event.
 - D. Basin side slopes above the normal water level should be no steeper than three feet horizontal to one foot vertical (3H:1V), and preferably flatter. A basin shelf with a minimum width of 10 feet and 1 foot deep below the normal water level is needed to enhance wildlife habitat, reduce potential safety hazards, and improve access for long-term maintenance.
 - E. To prevent short-circuiting, the distance between the major inlets and normal outlet shall be maximized.
 - F. Effective energy dissipation devices shall be provided that reduce outlet velocities to 4 feet per second (fps) or less. These devices shall consist of stilling basins or other such measures to prevent erosion at all stormwater outfalls into the basin and at the detention basin outlet.
 - G. Trash and floatable debris skimming devices shall be placed on the outlet of all on-site detention basins to provide treatment up to the critical duration 5-year storm event. These devices can consist of baffled weirs, submerged outlets or other such measures. Velocities through baffled weir devices shall be less than 0.5 fps.
 - H. All inlets to detention basins, wetlands, etc., shall be placed at or below the normal water level.
8. The determination of whether a design will result in an erosion problem shall be based on generally accepted engineering design manuals or practices.
9. Best Management Practices shall meet the standards established in the VBWD Watershed Management Plan for runoff water quality management and erosion control plans.
10. A maintenance agreement in the general format of Appendix B as revised and updated by the VBWD (attorney) is required prior to issuance of a VBWD permit.
11. Land used for stormwater management facilities shall be preserved by dedication and/or perpetual easement to the Valley Branch Watershed District. These easements shall cover those portions of the property which are adjacent to the facility and which lie below the 100-year flood elevation. Adequate access must be provided to all stormwater management facilities for inspection, maintenance, and landscaping upkeep, including appropriate equipment and vehicles.

RULE 3: EROSION & SEDIMENTATION CONTROL

Policies

1. To minimize the erosion which can occur as a result of land alteration, the Managers require that all projects which may affect the waters of the VBWD implement temporary and permanent erosion control measures. The permit applicant shall be responsible for removal of all temporary measures upon completion of the project.
2. A permit will not be required for usual agricultural practices, but the Managers will encourage good conservation measures.
3. If an erosion problem develops, the Managers will require action to correct the problem and prevent recurrence.
4. Submittals will be required for VBWD-permitted projects that must show how the project will meet the VBWD requirements for preventing sediment from leaving a site and for controlling erosion.

Standards

1. The Metropolitan Council's Minnesota Small Sites Best Management Practices Manual shall serve as the minimum guidelines for erosion control measures.
2. All activities shall be in compliance with the NPDES Construction Stormwater Permit as administered by the MPCA. (See Appendix D.)
3. If grading activities are proposed upstream of wetlands, sedimentation ponds are required. All dikes, ditch checks, sediment ponds and other features shall be designed in accordance with the erosion control plan requirements of the VBWD's Watershed Management Plan.
4. Plans shall include commonly accepted restoration methods.
5. Any disturbed areas shall be seeded and mulched within 7 days after the area is no longer actively being worked. All exposed soil areas with a slope of three feet horizontal to one foot vertical (3H:1V) or steeper must have temporary erosion protection or permanent cover within 3 days after the area is no longer actively being worked. The Managers may, if requested and conditions warrant, allow more time before seeding and mulching is required.
6. All erosion and sediment control measures shall be installed prior to alteration and shall be maintained until turf is established. The VBWD Engineer and/or VBWD Inspector shall be notified three days prior to commencement of grading to schedule an inspection of the project's erosion controls. The erosion controls must be in place and properly installed before grading will be permitted.
7. All construction-related sediment shall be removed from ponding areas upon completion of construction.

RULE 4: WETLAND MANAGEMENT & VEGETATIVE BUFFERS

Policies

1. To protect the wetlands within the VBWD, all projects below the 100-year flood level of a wetland will be regulated by the VBWD Managers.

2. The VBWD has adopted the Wetland Conservation Act of 1991, (Minnesota Laws 1991 Chapter 354, codified as Minnesota Statute Sections 84 and 103, as amended), and the accompanying rules of the BWSR (Minnesota Rules Chapter 8420, as amended), herein referred to as the WCA and the WCA Rules, respectively.
3. The VBWD will continue as the Local Government Unit (LGU) administering the WCA throughout the VBWD, as long as the cities and townships in VBWD continue to designate the VBWD as the LGU. The LGU responsible for administering the WCA on state land is the agency with responsibility for the land. For all projects requiring a VBWD permit, the VBWD will continue to administer the wetlands management provisions of its rules and regulations, regardless of LGU status for the WCA. In addition, in the event that the WCA should ever be repealed, the VBWD will incorporate the WCA requirements into the VBWD rules and regulations.
4. The VBWD will continue to accept the DNR's waived permit jurisdiction for Public Waters Work Permit program projects on a case-by-case basis. In these cases, a DNR representative will be included on the Technical Evaluation Panel (TEP).
5. Vegetative buffers will be required adjacent to lakes, streams, and wetlands because they reduce the amount of phosphorus from runoff, prevent shoreline erosion, discourage waterfowl nesting/feeding, and provide additional wildlife habitat.

Standards and Procedures

1. The VBWD shall appoint a person to serve on the TEP in accordance with WCA Rules part 8420.0240. The person must be a technical professional with expertise in administration of the WCA.
2. Exemption, No Loss determinations, and wetland boundary or type determinations under Minnesota Rules parts 8420.0210, 8420.0220, and 8420.0225 shall be made by the LGU. The LGU may seek the advice of the TEP on questions of wetland delineation and type. The LGU's decision is final unless appealed within thirty (30) days of its decision.
3. Sequencing and replacement plan decisions under Minnesota Rule part 8420.0520 – 8420.0550 shall be made following the same procedures as for VBWD permit review, plus the additional notice and time requirements of part 8420.0230 and as described in this section of the Rules.
4. The functions, values, and acreage lost as a result of a wetland alteration shall be replaced as required by the WCA Rules.
5. The VBWD shall ensure that the replacement plan monitoring, vegetative management, and enforcement requirements of WCA Rules part 8420.0600 – 8420.0630 are fulfilled.
6. Any wetland alteration shall not reduce the existing storage volume in the immediate watershed. Storage volume will be determined as stated elsewhere in these Rules.
7. The applicant is to provide all copies needed for proper distribution and recording at the time application is made.
8. Wetland alterations shall meet all other requirements of these Rules.
9. Any requirements or conditions the VBWD deems necessary to ensure the procedures of this section must be carried out.
10. All wetlands within the property of the permitted project shall be:

- A. Delineated by the techniques described in the *1987 Corps of Engineers Wetland Delineation Manual*,
 - B. Evaluated with the *Minnesota Routine Assessment Method for Evaluating Wetland Functions, Version 3.0* (MNRAM 3.0) or updated versions, and
 - C. Classified according to VBWD's wetland management classification system (see Appendix C). Based on the wetland's management classification, proposals must conform to the various average vegetative buffer width requirements, mitigation standards, and hydrologic guidelines shown in Appendix C.
11. A pre-permit application meeting between the permit applicant and the VBWD or TEP is strongly encouraged for all projects involving wetlands and wetland banks.
 12. The applicant shall submit five copies of the Combined Wetland Permit Application (CWPA) and one VBWD permit application form for consideration. Once the CWPA has been received, the VBWD will have up to 10 working days to review it for completeness and send a notice of application to the TEP. If the VBWD determines the CWPA is not complete, the permit applicant will be notified. The TEP will be given at least 15 working days to review and comment on the CWPA. The VBWD will review the application based on the policies and standards of the VBWD Watershed Management Plan, the WCA, and these Rules. After the TEP has been given opportunity to review and comment on the CWPA, the VBWD will prepare and make recommendations to the LGU based on the TEP comments regarding the CWPA's conformance to the WCA rules and guidelines. The permit applicant and any TEP member can request a meeting to further discuss the CWPA at anytime. The LGU will review the TEP recommendations. A *Notice of Decision* will be sent within 10 working days of a decision, in accordance with the WCA Rules part 8420.0230, Subpart 2.
 13. For projects requiring wetland replacement, a Wetland Replacement Plan shall be submitted with Part 1 and 2 of the CWPA. The permit review process will be as described in Standard 12.
 14. For wetland banking applications, a Bank Application Form and appropriate BWSR forms and checklists shall be submitted. The permit review process will be as described in Standard 12, but two of the three TEP members must meet on the site prior to the LGU decision. The permit applicant is responsible for obtaining all other permit approvals (i.e. U.S. Army Corps of Engineers).
 15. The VBWD may permit the excavation of some wetlands. However, no excavation will be allowed in wetlands classified as Type 7 or Type 8 wetlands as defined by the Cowardin classification system developed by the U.S. Fish and Wildlife Service. The VBWD may permit excavation in existing wetlands when the following apply:
 - A. All property owners contiguous to the wetland or within 1000 feet of the proposed activity join in the application.
 - B. The excavated spoil material will not be placed within a wetland.
 - C. The wetland is a Manage 3 wetland, as classified under Standard 10C/Appendix C.
 - D. No more than 50 percent of a Type 1, 2, or 6 wetlands is impacted, unless it is an approved action as stated in Minnesota Rules 8420.0541 and will not result in a conversion of wetland to upland or deep water habitat (greater than 2.0 meters).
 - E. No more than 5% of the total wetland area or one half acre, whichever is less, of a Type 3, 4, or 5 wetlands is impacted.

Considerations will be given to allow excavations of existing wetland areas so that adjacent replacement wetlands are hydrologically and ecologically connected to existing wetlands or if the proposed excavation is certain to result in greater functions and values as determined by MNRAM 3.0 or an updated version.

16. The decision of the VBWD to approve, approve with conditions, or reject a No Loss, Exemption or Wetland Replacement Plan Application becomes final thirty (30) days after the date on which the decision is mailed to those required to receive notice of the decision.
17. The determination, application, or decision made under these Rules may be appealed to the BWSR under WCA Rules part 8420.0250.
18. Prior to the VBWD issuing a permit for the construction of wetland replacement sites, the permit applicant must submit a draft *Declaration of Restrictions and Covenants*, an *Affidavit of Landowner*, and *Consent to Replacement Wetland*. Once the VBWD Attorney has approved the draft *Declaration of Restrictions and Covenants*, which shall include a metes and bounds survey of the wetland replacement area, the *Declaration of Restrictions and Covenants* must be recorded. Proof of recording the *Declaration of Restrictions and Covenants* and *Consent to Replacement Wetland*, along with a signed and notarized *Affidavit of Landowner* must be submitted to the VBWD Attorney prior to impacting a wetland.
19. The applicant shall post a cash surety or letter of credit equivalent to 150 percent of the estimated construction cost of the replacement wetland or the cost of obtaining suitable wetland banking credits, to be determined by the permit applicant and approved by the VBWD Engineer. Additional cash sureties may be required based upon conditions imposed on the applicant by the VBWD.
20. Replacement wetlands will require monitoring, vegetation management, and annual reporting for 5 years after completion with possible extensions defined in the WCA Rules part 8420.0600 – 8420.0630. Monitoring programs are the responsibility of the applicant and are to be performed according to the WCA Rules. The VBWD may perform this monitoring and vegetation management under some circumstances, at the expense of the applicant. If at the end of 5 years, the replacement wetland components meet the approved performance standards, future monitoring will not be required.
21. Vegetative Buffer Strips.

Buffer vegetation shall be provided around wetlands, streams, and lakes as discussed in the following paragraphs and 10c. Buffer vegetation shall not be cultivated, cropped, pastured, mowed, fertilized, subject to the placement of mulch or yard waste, or otherwise disturbed, except for periodic cutting or burning that promotes the health of the buffer, actions to address disease or invasive species, mowing for purposes of public safety, temporary disturbance for placement or repair of buried utilities, or other actions to maintain or improve buffer quality, each as approved by the VBWD or when implemented pursuant to a written agreement executed with the VBWD. No new structure or impervious surface shall be placed within a buffer. No fill, debris or other material shall be excavated from or placed within a buffer.

- A. Wetlands: A minimum 16.5 foot vegetative buffer strip around the delineated wetland boundary or the Ordinary High Water level (OHW), whichever is greater in elevation, shall be provided for all permitted activities. Average buffer widths at wetlands shall conform to Standard 10C and Appendix C. A mowed access path within the buffer is allowed, but must not exceed a width of 6 feet. Access paths shall not be located where concentrated runoff will flow to the wetland.

B. Streams:

- i. Valley Creek: A minimum 100-foot vegetative buffer strip measured perpendicular from the edge of water on each side of the creek shall be provided and maintained at all times for all permitted activities adjacent to the perennial portion of Valley Creek. Exceptions from this requirement for areas, such as water crossings, are allowed if the permit applicant fully documents the circumstances and reasons that the buffer encroachment is necessary. A mowed access path within the buffer is allowed, but must not exceed a width of 6 feet. Access paths shall not be located where concentrated runoff will flow to the creek.
- ii. Raleigh Creek & All Intermittent Streams (including the intermittent reaches of Valley Creek): An average 50-foot wide vegetative buffer strip and a minimum 25-foot wide foot vegetative buffer strip measured perpendicular from and on both sides of the centerline shall be provided and maintained at all times for all permitted activities adjacent to the stream. Exceptions from this requirement for special situations, such as water crossings, are allowed if the permit applicant fully documents the circumstances and reasons that the buffer encroachment is necessary. A mowed access path within the buffer is allowed, but must not exceed a width of 6 feet. Access paths shall not be located where concentrated runoff will flow to the creek.

Drainageways that serve local projects (such as road ditches) and convey runoff to a stormwater management facility prior to draining to a stream or other VBWD water are not considered intermittent streams by the VBWD and are not required to have vegetative buffers.

- C. Lakes: A minimum 35-foot wide buffer strip measured perpendicular to the OHW extending 35 feet inland shall be provided. A mowed access and shoreline is allowed, but must not exceed 30% of the landowner's shoreline width or 30 feet, whichever is less. For shorelines less than 20 feet wide, a 6 foot-wide access path is allowed. Access paths shall not be located where concentrated runoff will flow to the lake.

For this rule, lakes are defined as Silver Lake, Long Lake, Lake DeMontreville, Lake Olson, Lake Jane, Lake Elmo, Horseshoe Lake, Lake Edith, and Sunfish Lake. Other non-stormwater pond basins will be considered wetlands and will need to conform to the required vegetative buffers discussed elsewhere in these Rules. (These lakes are the VBWD waters with a "P" designation in the Minnesota Department of Natural Resources' public water inventory. Acorn Lake and Eagle Point Lake were given a "P" designation, but are considered wetlands by the VBWD because of their shallow depths.)

RULES 5, 6, 7, 8: FLOODPLAIN MANAGEMENT

(Includes Shoreland and Stream Alternations; Stream and Lake Crossings; Floodplain and Drainage Alternations; and Landlocked Basins)

Policies

1. It is in the best interest of the public health, safety and welfare that the Managers regulate the development and the use of floodplains.

2. Alterations or work within the floodplain or waters of the VBWD will be reviewed to:
 - A. control floodplain encroachments
 - B. prevent adverse environmental impact

Standards

1. Flood Level Determination
 - A. Ultimate development of the tributary watershed shall be assumed.
 - B. Design criteria shall be the 2, 10, and 100-year storms. When using SCS methodologies for event modeling, the Type II storm distribution shall be used. The 100-year 10-day snowmelt event shall also be modeled.
 - C. Flood levels shall be either determined or approved by the VBWD Engineer.
 - D. Many depressions within the VBWD are landlocked. That is, they have no surface water outlet. Because there is no surface outlet, runoff collecting in these depressions is removed only by seepage and evaporation. Under these circumstances, a detailed flood level analysis should include the effects of seepage and evaporation. Analysis of this type can be very complex.

In order to determine appropriate flood levels for these depressions, a simpler method of analysis was devised. With this method, the approximate 100-year flood level is determined using the annual runoff volumes shown in the following table:

Land Use	100-year Annual Runoff Volume, Inches	Average Annual Runoff Volume, Inches	Differences: Net 100-Year Annual Volume, Inches
Impervious	32	16	16
Turfed	18	8	10
Water Surface	12	-6	18

For a natural landlocked pond, the average year's runoff volume is assumed to be dissipated by the average seepage rate of the pond. The additional runoff for a wet year is assumed to be stored in the pond above the normal pond level (the long-term average water level of the pond). If the applicant can demonstrate that seepage will be greater than is assumed by this method, a less conservative flood level may be accepted.

The 100-year flood level is the level at which the depression will store the runoff volume calculated using the above table and the tributary watershed. Storage below the normal water level of the depression shall not be included in the computations.

To use the land within the VBWD to the maximum extent desirable, the communities and developers are encouraged to make detailed analyses and accurately determine 100-year flood levels. However, in the absence of a detailed analysis, the VBWD Engineer's recommendations and requirements shall be based upon flood levels determined using the above approximate method.

2. Minimum Building Elevations

- A. Adjacent to all waters of the VBWD, the Managers shall set the minimum building elevation at two feet above the 100-year flood elevation. The minimum building elevation for each lot shall be noted on the grading plan.
- B. The VBWD Managers may deviate from their usual minimum building elevation requirement if the applicant provides site-specific data (e.g. soil borings) that show buildings will be protected from flooding.

3. Floodplain Preservation and Uses

- A. Floodplains adjacent to existing and future waters and waterways shall be preserved by dedication and/or perpetual easement to the VBWD. These easements shall cover those portions of the property which are adjacent to the water or waterway and which lie below the 100-year flood elevation.
- B. Filling and crossing of waters of the VBWD.
 - 1. Lakes, ponds and storage sites -- fill volumes shall be limited so that the cumulative effect of all possible filling will not raise the 100-year flood level more than 0.1 foot.
 - 2. Waterways -- fill and other alterations shall be limited so that the cumulative effect of all possible alterations shall not increase the 100-year flood level more than 0.5 foot.
- C. The Board of Managers may determine that certain areas of the VBWD are or will be in a flood situation and will not allow any filling until the situation has been corrected.
- D. Uses of Floodplain Adjacent to Waters of the VBWD.
 - 1. Buildings or other improvements to be located in the floodplain or materials to be stored in the floodplain will be permitted only when:
 - a. It can be shown that the building or improvements to be located in the floodplain will not be significantly damaged by flooding.
 - b. It can be shown that the improvements and materials will not unreasonably endanger life or property.
 - c. It can be shown that the improvements and materials will not unreasonably affect the water resource.

4. Floodplain Alterations

- A. Alterations which will unreasonably impact another community will not be permitted. Such alterations may include: The outletting of landlocked ponds to another community and modifying lake outlet elevations.
- B. Alterations which will unnecessarily impact the waters of the VBWD will not be permitted.
- C. Alterations not in conformance with the VBWD Watershed Management Plan and applicable Minnesota Law will not be permitted.

RULE 9: GROUNDWATER MANAGEMENT

Policies

1. Negative impacts (e.g., reduced flow to surface water bodies, lowered lake or wetland levels, well interference) to groundwater dependent resources will be prevented through permit review, community plan review, and education efforts.
2. Negative impacts (e.g., flooding) to surface waters due to groundwater quality mitigation efforts (e.g., pump-out systems) will be prevented through permit review, community plan review, and education efforts.

Standards

1. See other Rules (e.g. Rule 2, Rule 11).

RULE 10: INDIVIDUAL SEWAGE TREATMENT SYSTEMS

Policies

1. Since septic systems are already regulated by the MPCA, the counties and the communities, VBWD will not take on this role, but VBWD will cooperate with other units of government to address specific concerns or issues.
2. VBWD supports Washington County's requirement that septic systems not be placed within drainage easements, which effectively prevents installation of septic systems within the 100-year floodplain of VBWD waters. (See Rule 5, 6, 7, 8, Standard 3A.)

RULE 11: WATER APPROPRIATIONS

Policies

1. To manage the water resources of the VBWD, the Managers must be informed of the proposed appropriation of ground and/or surface waters.
2. The Managers require that the effect of the proposed appropriation be defined before approval is granted.

Standards

1. In all cases of appropriation of waters requiring a DNR permit, a copy of the permit application must be filed with the Managers for their review and approval.
2. The Managers will act on the DNR permit application within 30 days, or as required by the DNR, after receipt of the complete application.

RULE 12: GREENWAYS AND OPEN SPACE

No Rule.

RULE 13: FEES

1. The Application Fee is to be used to defray the VBWD's review, inspection, and administration costs. The amount of the application fee is set by the Managers and can be found by contacting the VBWD. Any costs incurred by the VBWD greater than the submitted fee will be billed to the applicant.
2. No fee is required by governmental units applying for a VBWD permit.
3. Any unused portion of the fee over \$500 will be returned to the permit holder.

RULE 14: SURETIES AND PERFORMANCE BONDS

1. To assure compliance with these Rules, the Managers may require the posting of a performance bond or other security where it is shown to be reasonable and necessary under the particular circumstances of any permit application filed with the VBWD.
2. Where a municipality or other governmental agency includes in its requirements that the applicant furnish a performance bond or other security, the VBWD may require an additional performance bond from the applicant.
3. At the Managers' discretion, the VBWD may reduce the amount of the security held for a project if the permit holder requests a reduction with documentation of the project's progress.

RULE 15: VARIANCES

1. The Managers may grant variances from these Rules when they find that due to unique physical conditions of the land or waters involved, extraordinary and unnecessary hardship may result from strict compliance. Such variances will not have the effect of nullifying the intent and purpose of these Rules, or the VBWD Watershed Management Plan.
2. In considering the variance, the Managers shall consider the effect upon the entire VBWD and VBWD Watershed Management Plan.
3. An application for a variance shall be submitted to the Managers and shall document the exceptional conditions and peculiar difficulties claimed and resulting impacts from approval of the variance.
4. The Managers shall approve or deny the variance within 60 days of receipt of a complete variance application.

RULE 16: ENFORCEMENT

See Enforcement and Severability section of Rule 1.

RULE 17: LOCAL GOVERNMENT RESPONSIBILITIES

Policies

1. The communities are responsible for:
 - A. Land use plans and zoning ordinances

- B. Local watershed management plans
- C. Shoreland and floodplain ordinances

The Managers will review these plans and documents to minimize adverse impacts to the waters of the VBWD and to ensure regional water management needs are included in the local watershed management plans.

2. Communities are responsible for enforcing minimum building elevations established by the VBWD.
3. Communities are responsible for maintaining stormwater management facilities where easements covering the facility have been granted to the community or to support the VBWD in using the easement to maintain the facility.
4. Communities shall submit copies of developers' agreements and/or grading permits of proposed subdivisions and development plans for review by the VBWD.
5. In cases of mining operations, a copy of the permit application must be filed with the Managers for their review and approval.

PUBLICATION AND EFFECTIVE DATE

The Managers shall cause to be published in a legal newspaper, published in the counties of the VBWD, a copy of these Rules and Regulations as adopted. The Managers shall also file and record a certified copy of these Rules and Regulations in the office of the County Recorder of the counties of the VBWD.

These Rules and Regulations are adopted this 25th day of January, 2007, by the Board of Managers of the Valley Branch Watershed District pursuant to Minnesota Statutes, Chapter 103, following a public hearing held on January 25, 2006.

Lincoln Fetcher, President

Donald G. Scheel, Secretary

CERTIFICATION

I hereby certify that I have compared the foregoing copy of the Rules and Regulations of the Valley Branch Watershed District with the original thereof contained in the files and records of my office and I find the same to be true, complete and correct; I further certify that said Rules and Regulations were adopted by the unanimous vote of the managers of the VBWD.

Donald G. Scheel, Secretary

APPENDIX A

Stormwater Volume Checklist

Stormwater Volume Checklist

The completion of this checklist is required for all projects requiring a permit from Valley Branch Watershed District.

For detailed information on stormwater management techniques and policies, see the Alternative Stormwater Best Management Practices Guidebook, published by Valley Branch Watershed District, April 2000. Call 952-832-2622 to receive a copy.

Project Name:

Site Design to Reduce Stormwater Runoff	Yes	No	If No, Why Not?
Building Locations			
Are stable natural drainageways, swales, and ravines preserved under proposed conditions?			
Are buildings set back 40 feet from the top of natural slopes greater than 18% over a length of 100 feet in the absence of stricter bluff ordinances?			
Cul-de-Sac Design			
Are all proposed cul-de-sac radii less than 39 feet?			
Are the centers of proposed cul-de-sacs unpaved, depressed islands (with rainwater gardens) with minimum diameters of 20 feet?			
Driveway Design			
Are proposed houses set back no more than 20 feet from the front property line?			
Are proposed long driveways limited to only 12 feet wide at the street?			
Are proposed driveways crowned and/or draining to green areas/rainwater gardens?			
Are proposed driveways shared?			
Are wheel track driveways being proposed?			
Are driveways proposed to be constructed with pervious pavement?			
Are turfed geotextile pavers proposed for summer temporary overflow parking along driveways?			
Parking Lot Design			
Are proposed 90-degree parking stalls 9 feet wide or less?			
Are proposed 90-degree parking stalls 18 feet long or less?			
Are 30% of the proposed spaces dimensioned for compact cars only?			
Are turfed geotextile pavers proposed for summer spillover parking areas?			
Are parking lots proposed to be constructed with pervious pavement?			
What is the minimum number of parking stalls required by the city? (please fill in number)			
What is the maximum number of parking stalls required by the city? (please fill in number)			
How many parking stalls are proposed? (please fill in number)			
Are the minimum number of parking stalls being proposed?			
Have the total number of proposed parking stalls been reduced because of shared parking with a nearby business?			
Will the impervious areas be disconnected to promote filtration and infiltration?			
Will the parking lot drain into infiltration islands/rainwater gardens?			
Will snow from the parking lot be plowed and stored in pervious areas?			
Street Design			
Are proposed streets crowned and curbless?			
Will pervious pavement be used?			
Will runoff be directed to vegetated swales and infiltration basins/rainwater gardens?			
Will perforated subsurface pipes, tanks, and storage systems be constructed?			
Will parking be needed and allowed on both sides, one side, or not at all on the streets? (please fill in answer)			
Are low-volume residential streets a maximum of 24 feet wide when parking & grass shoulders are proposed on both sides or when parking is not allowed?			
Are residential minor streets a maximum of 28 feet wide?			
Are residential collector streets a maximum of 31 feet wide?			
Path/Trail Design			
Will paths and sidewalks be constructed with porous material (wood chips or pervious pavement)?			
What is the narrowest width the city allows? (please fill in width)			
What is the width of proposed trails? (please fill in width)			
Rooftop Runoff			
Will 100% of the roof runoff be directed to permeable surfaces?			
Will rooftop storage be used?			
Will a green roof be constructed?			
Will rain barrels/cisterns be used or required?			
Continued on back			

Planting Design	Yes	No	If No, Why Not?
Do the specifications include loosening soils to a depth of 24 inches to a maximum compaction of 85% standard proctor density prior to planting?			
Do the specifications include tilling the upper 10 inches of soils prior to planting?			
Are islands proposed to be vegetated instead of paved?			
Does the planting plan include trees that at maturity will provide canopy over at least 50% of the paved area?			
Are deep-rooted trees, shrubs, wildflowers, and grasses planned in at least 25% of the project's green space?			
Open Space Subdivision Design			
Is 50% or more of the site preserved as natural area?			
Best Management Practices for Use in Development			
Buffers			
What is the proposed buffer zone along streams, wetlands, and lakes? (fill in width)			
Vegetated Swales			
Are vegetated swales proposed to convey stormwater?			
Will vegetated swales have native, deep-rooted vegetation?			
Vegetated Filter Strips			
Are filter strips proposed for sheet flows from impervious areas?			
Infiltration Basins			
Are infiltration basins proposed for the project?			
Was the infiltration rate of the soils at the proposed infiltration basins measured/tested?			
Was a soil boring conducted at all proposed infiltration basins?			
Using the Unified Soil Classification System, what is the classification of the least permeable soil layer at the proposed infiltration basin? (please fill in)			
What is the Hydrologic Group classification of the soil at the proposed infiltration basins? (please fill in)			
Is the base of the infiltration basin at least 3 feet above bedrock and the water table, or an impermeable layer?			
What is the depth to bedrock from the bottom of the proposed infiltration basin? (please fill in)			
Is the basin proposed to be planted with deep-rooted vegetation?			
Is the basin designed to treat the VBWD-required runoff volume and to infiltrate the stormwater within 48 hours?			
Is the basin set back at least 10 feet from all property lines?			
Is the basin set back at least 10 feet from building foundations?			
Is the basin set back at least 50 feet from private wells/public water wells?			
Is the basin set back at least 35 feet from septic systems?			
What is the drainage area to the infiltration basin? (please fill in)			
For infiltration basins with drainage areas less than two acres, will at least 50% of the inflow volume to the infiltration basin be pre-treated?			
For infiltration basins with drainage areas greater than two acres, will at all of the inflow volume to the infiltration basin be pre-treated?			
Will the proposed infiltration basin be staked off and marked during construction to prevent compaction?			
Who will maintain the infiltration basin? (please write name and attach contract)			
Sand Filters			
Are sand filters proposed on the site?			
Who will maintain the sand filter? (please write name and attach contract)			
Is the sand filter designed to accommodate 3/4-inch of runoff from its impervious drainage area?			

Appendix B
Maintenance Agreements

STORM WATER QUALITY TREATMENT FACILITY MAINTENANCE AGREEMENT

THIS AGREEMENT is made this _____ day of _____, 20____ by and between the Valley Branch Watershed District (hereinafter referred to as "VBWD") and _____ (a Minnesota corporation or an individual) (hereinafter referred to as "Owner(s)") with reference to the following facts and circumstances:

A. _____ is/are the fee Owner(s) of certain real property situated in the city of _____, _____ County, Minnesota, legally described as follows:

(Type Legal Description Here)
(hereinafter referred to as "Property")

B. As a condition of its approval of the development of the Subject Property, VBWD has required that the Owner(s) enter into an agreement for the maintenance of the Storm Water Quality Treatment Facility for the Property. This Storm Water Quality Treatment Facility is located within the boundaries of the Property on construction plans prepared by Owner(s).

C. The Owner(s) desires to set forth its agreement with respect to the maintenance of the Storm Water Quality Treatment Facility and the cost of such maintenance.

NOW, THEREFORE, in consideration of the foregoing facts and circumstances, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. The Owner(s) shall grant to VBWD the necessary easements and rights-of-way and/or maintain perpetual access from public rights-of-way to the water quality unit for VBWD, its agent or contractor.
2. VBWD shall record this Agreement with the Recorder of the County of Washington, Minnesota. The Owner(s) shall pay a \$100.00 processing and filing fee to VBWD upon submission of this Agreement.
3. The Owner(s), for itself and respective successors and assigns, hereby waives any statutory right which it may have to contest any assessment for costs hereunder by VBWD.
4. Until such time as the permit with VBWD for the project is closed out:
 - 4a. For the purposes of this Agreement, maintenance of the Storm Water Quality Treatment Facility shall include, but not be limited to, annual inspection, annual maintenance reporting and certification by a professional engineer (provided by Owner(s)) that the facility is functioning in accordance with the approved plans and minimum maintenance standards set forth by VBWD as set forth and defined in Exhibit A.
 - 4b. If necessary, Owner(s) shall undertake at its expense periodic dredging or removal of silt buildup and other deposited materials within the Storm Water Quality Treatment Facility to maintain its treatment capacity and proper operation, as established in the

construction plans. Any maintenance needs required by VBWD shall occur within 30 days of the certified inspection.

- 4c. Upon receipt of the annual certification of inspection and maintenance report, VBWD may inspect the facility to ensure that the facility meets the minimum maintenance standards. Annual inspection of the facility shall not render VBWD responsible for identifying ongoing maintenance needs.
 - 4d. The Owner(s) shall be solely responsible for the maintenance of the facility, and shall bear all costs of such maintenance. If the Owner(s) do(es) not undertake the necessary maintenance within thirty (30) days of notification by VBWD, VBWD may contract such maintenance, but the costs reasonably incurred by VBWD for contracting such maintenance shall be reimbursed to VBWD by the Owner(s).
5. After the VBWD closes the permit, the Owner(s) for itself and respective successors and assigns, will remain responsible for vegetation management of all stormwater management facilities, including but not limited to weeding and maintaining the originally planned and installed vegetation species and varieties.
 6. The terms and conditions of this Agreement shall be binding upon, and shall inure to the benefit of, the parties hereto and their respective successors and assigns.

DRAFTED BY:
LAWSON, MARSHALL, McDONALD,
GALOWITZ & WOLLE, P.A.

Lawyers

10390 39th Street North

Lake Elmo, MN 55042

Telephone: (651) 777-6960

(BW)

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Exhibit A

Minimum Maintenance Standards for Stormwater Quality Treatment Facilities

- 1) Infiltration Facilities
 - a) Debris
 - i) Clear litter and vegetation debris from the contributing drainage area
 - ii) Clean bottoms of the facilities
 - iii) Clear debris from inflow pipes and/or inlet areas
 - iv) Clear debris from overflows
 - b) Forebays
 - i) Remove trapped sediment if less than 50% of storage volume is remaining
 - c) Vegetation
 - i) Mow and fertilize as per Operations and Maintenance Plan
 - ii) Remove undesirable vegetation and restore any dead vegetation that was installed as part of the project
 - iii) Correct/stabilize any erosion problems
 - d) Sediment Removal
 - i) Remove any sediment that has accumulated in basin
 - ii) Remove winter sand deposition every spring
 - e) Inlets/Outlets
 - i) Repair as needed
 - ii) Remove any sediment or oil from catch basins and/or manholes
 - f) Filter Bed
 - i) Remove and replace upper layers of soil if basin does not drain down within 72 hours.
- 2) Stormwater Ponds
 - a) Debris
 - i) Clear litter and vegetation debris from contributing drainage area
 - ii) Remove floatable debris in and around the pond area including, but not limited to: oils, gases, debris and other pollutants.
 - iii) Clear litter from pond inflow pipe
 - iv) Clear litter from pond outlet
 - b) Vegetation
 - i) Maintain landscape adjacent to the pond per original design, including but not limited to: maintenance of the buffer strip and other plant materials as per original plan design.
 - ii) Remove undesirable vegetation and restore any dead vegetation that was installed as part of the project.

- iii) Correct/stabilize any erosion problems
- c) Sediment Removal
 - i) Remove sediment if less than 50% of storage volume is remaining
- d) Inlets/Outlets
 - i) Repair as needed
 - ii) Remove any sediment from sump catch basins and/or manholes
 - iii) Remove debris from trashracks
- e) Emergency Overflow
 - i) Clear spillway of debris, obstructions, and inappropriate vegetation
 - ii) Repair any cracking, bulging, or sliding
 - iii) Maintain and correct as needed all erosion control measures, including but not limited to riprap storm sewer outlets

Disposal of materials shall be in accordance with local, state and federal requirements as applicable.

Clean up and maintenance shall occur immediately after a spill takes place. Appropriate regulatory agencies should also be notified in the event of a spill.

Annual inspection, maintenance reporting and certification shall be conducted by a professional engineer (Provided by Owner). Information must be submitted to the VBWD annually.

Appendix C

Wetland Inventory and Functional Assessment and Classification

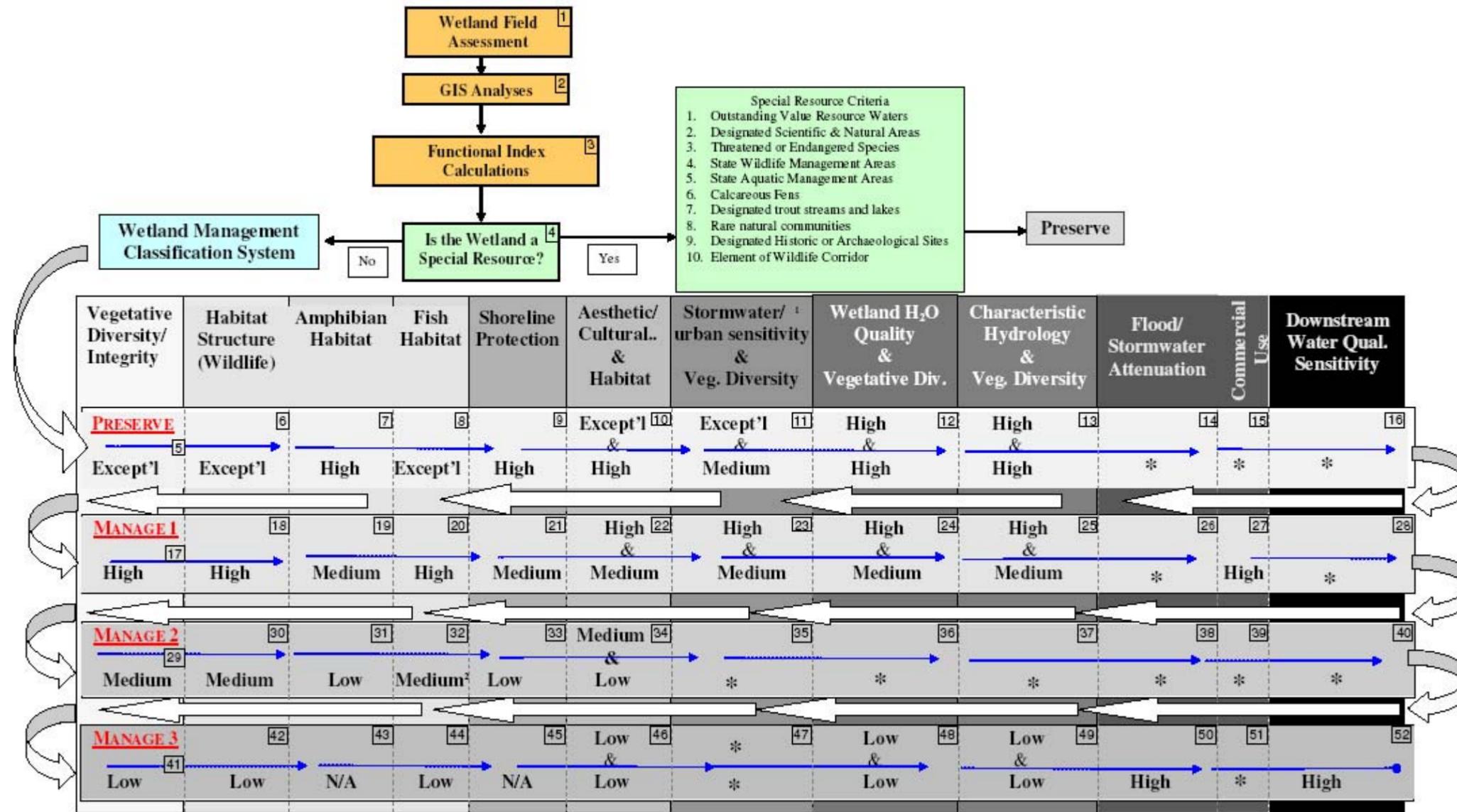
Wetland inventories and functional assessments must be completed through a field assessment of wetlands using the (MNRAM 3.0), or most recent version, which is the State-approved standard methodology.

The permit applicant's wetland scientist shall use the flowchart shown on Figure C-1 to classify the wetlands. The VBWD will review and must approve the classification assigned to the wetland. The flowchart takes into account wetland function, location, type, size, hydrologic setting, and vegetation data, along with a number of other specific function and value parameters that are used to determine the overall functional ratings for each wetland.

The VBWD-required buffer and hydrologic standards are shown in Table C-2.

**Figure C-1
Wetland Management Classification Flowchart**

Each wetland will be ranked into a Wetland Management group by the highest rated function for the wetland. Follow the arrows through numbered boxes in progression through the tables; classify wetlands into the first group that applies.



¹ For types as shown in Table C-1

* This rating does not apply here.

Table C-2
WETLAND MANAGEMENT STANDARDS AND GUIDELINES¹
Valley Branch Watershed District

Management Class	Average Buffer ^{2,3,4}	Hydrologic Guidelines
A-Preserve	60 feet Monuments required marking buffer edge.	<u>Bounce (10-year, 24-hour):</u> Existing <u>Inundation (1- & 2-year, 24-hour):</u> Existing <u>Inundation (10-year, 24-hour):</u> Existing <u>Runout Control:</u> ⁵ No Change Maintain existing hydrology: (The runoff volume flowing into the wetland from a 2-year 24-hour event cannot be changed by more than 10% ⁶) Encourage infiltration and reduced impervious BMPs Conduct water budget analysis
B-Manage 1	40 feet Monuments required marking buffer edge.	<u>Bounce (10-year, 24-hour):</u> Existing + 0.5 ft <u>Inundation (1- & 2-year, 24-hour):</u> Existing plus 1 day <u>Inundation (10-year, 24-hour):</u> Existing + 7 days <u>Runout Control:</u> ⁵ No Change Maintain existing hydrology: (The runoff volume flowing into the wetland from a 2-year 24-hour event cannot be changed by more than 10% ⁶) Encourage infiltration and reduced impervious BMPs
C-Manage 2	30 feet Monuments required marking buffer edge.	<u>Bounce (10-year, 24-hour):</u> Existing + 1.0 ft <u>Inundation (1- & 2-year, 24-hour):</u> Existing plus 2 days <u>Inundation (10-year, 24-hour):</u> Existing + 14 days <u>Runout Control:</u> ⁵ 0 to 1.0 ft above existing runout Runoff volume flowing into the wetland from a 2-year 24-hour event cannot be changed by more than 25% ⁶
D-Manage 3	25 feet	<u>Bounce (10-year, 24-hour):</u> No Limit <u>Inundation (1- & 2-year, 24-hour):</u> Existing plus 7 days <u>Inundation (10-year, 24-hour):</u> Existing + 21 days <u>Runout Control:</u> ⁵ 0 to 4.0 ft above existing runout Runoff volume flowing into the wetland from a 2-year 24-hour event cannot be changed by more than 25% ⁶

¹ From Minnesota Routine Assessment Method For Evaluating Wetland Functions, Version 3.0 (MNRAM).

² Buffers are unmowed, naturalized strips of vegetation around the perimeter of the wetland. Buffers shall be provided during development or redevelopment. Buffer widths will be measured from the delineated wetland boundary or the OHW, whichever is greater in elevation. See Rule 4 for details regarding buffers.

³ A minimum 16.5 foot vegetative buffer strip is required around the delineated wetland boundary or the OHW, whichever is greater in elevation.

⁴ The average buffer widths listed below are within the ranges recommended by MNRAM.

⁵ If currently landlocked, new outlet should be above delineated wetland boundary elevation.

⁶ This is not a guideline of MNRAM, but a VBWD standard meant to meet the intent of the Wetland Conservation Act's purpose of avoiding direct or indirect impacts from activities that destroy or diminish the quantity, quality, and biological diversity of wetlands. In lieu of the applicant submitting plans and calculations that show the hydrology of wetlands will not be negatively impacted due to the proposed project, a 5-year wetland monitoring plan shall be submitted and approved by the VBWD Engineer prior to construction. If wetlands are negatively impacted by hydrology changes due to the project, the applicant will need to replace the lost wetlands.

Appendix D

National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) for construction activities as administered by the Minnesota Pollution Control Agency

**GENERAL PERMIT
AUTHORIZATION TO DISCHARGE
STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY
UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION
SYSTEM/STATE DISPOSAL SYSTEM PERMIT PROGRAM**

ISSUANCE DATE: August 1, 2003 EXPIRATION DATE: August 1, 2008

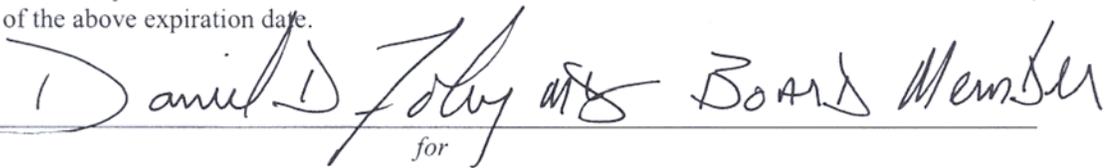
In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et seq.; hereinafter, the "Act"), 40 CFR 122, 123, and 124, as amended, et seq.; Minn. Stat. Chs. 115 and 116, as amended, and Minn. R. Ch. 7001:

This permit regulates the discharges of **storm water** to the **waters of the state** of Minnesota associated with **construction activity**. This permit covers the **storm water** discharges identified in Part I.A. of this permit. The limitations on permit coverage are identified in Part I.B. of this permit.

This permit requires the development and implementation of a **Storm Water Pollution Prevention Plan (SWPPP)**. No person shall commence **construction activity** covered by Part I.A. until permit coverage under this permit is effective or, if applicable, until the Minnesota Pollution Control Agency (MPCA) has issued an individual NPDES/SDS construction **storm water** permit for the project. The **SWPPP** must be completed prior to submitting any permit application and prior to conducting any **construction activity** by any required **Permittee**.

Unless notified by the MPCA to the contrary, applicants who submit a completed application (including permit fee) in accordance with the requirements of this permit are authorized to discharge **storm water** from construction sites under the terms and conditions of this permit 7, 30, or 90 days after the postmarked date of the completed application as described in Part II.B.

Coverage under this permit will remain in effect until the **owner** has submitted a **Notice of Termination**, regardless of the above expiration date.

Signature: 
for
Minnesota Pollution Control Agency

If you have questions on this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact the appropriate MPCA offices.

**Minnesota Pollution Control Agency
Construction Storm Water Program
520 Lafayette Road North
St. Paul, MN 55155-4194
Telephone (651) 297-2274**

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PART I. PERMIT COVERAGE AND LIMITATIONS

A. PERMIT COVERAGE

1. This permit is required for **storm water** discharges associated with **construction activity** and with **small construction activity** as defined in 40 C.F.R. part 122.26(b)(14)(x) and (b)(15), respectively.
2. This permit authorizes, subject to the terms and conditions of this permit, the discharge of **storm water** associated with **construction activity** and **small construction activity**.

Construction activity includes clearing, grading and excavation, that disturbs land of equal to or greater than five (5) acres and includes the disturbance of less than five (5) acres of total land area that is a part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb five (5) acres or more.

Small construction activity includes clearing, grading and excavation, that disturbs land of equal to or greater than one (1) acre, and includes the disturbance of less than one (1) acre of total land area that is part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb equal to or greater than one and less than five (5) acres. **Small construction activity** does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

3. This permit covers all areas of the state of Minnesota.
4. For Parts I.B through Appendix A of this permit, all reference to **construction activity** includes both **small construction activity** and **construction activity**.

B. LIMITATIONS OF COVERAGE

This permit does not cover the following activities:

1. Discharges or releases that are not **storm water** except those non-**storm water** discharges authorized under Part IV.D.
2. The placement of fill into **waters of the state** requiring local, state, or federal authorizations (such as U.S. Army Corps of Engineers Section 404 permits, Department of Natural Resources Public Waters Work Permits or Local Governmental Unit Wetland Conservation Act replacement plans or determinations).
3. **Storm water** discharges associated with industrial activity that originate from the site after construction activities have been completed and the site has undergone **final stabilization**. Post-construction industrial **storm water** discharges may need to be covered by a separate NPDES/SDS permit.
4. Non-point source agricultural and silvicultural discharges excluded from **NPDES** permit requirements under 40 CFR part 122.3(e).
5. **Discharges** to the waters identified below unless the requirements of Appendix A. are complied with:

- a. Discharges into outstanding resource value waters (ORVWs) as defined in Minn. R. 7050.0180, subp. 3 and 6, except calcareous fens listed in Minn. R. 7050.0180, subp. 6.b.
 - b. Discharges into Trout waters as listed in Minn. R. 6264.0050, subp. 2 and 4.
 - c. Discharges into **Wetlands** as listed in Minn. R. 7050.0130, item. F.
 - d. Discharges from projects that have not met applicable Environmental Review requirements under state or federal laws.
 - e. Discharges that adversely impact or contribute to adverse impacts on a listed endangered or threatened species or adversely modify a designated critical habitat.
 - f. Discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered archeological sites.
6. Discharges to calcareous fens listed in Minn. R. 7050.0180, subp. 6.b.
 7. Discharges to waters for which there is a total maximum daily load (TMDL) allocation for sediment and parameters associated with sediment transport are not eligible for coverage under this permit unless the **Permittee(s)** develop and certify a **SWPPP** that is consistent with the assumptions, allocations and requirements in the approved TMDL. To be eligible for coverage under this general permit, **Permittee(s)** must incorporate into their **SWPPP** any conditions applicable to their discharges necessary for consistency with the assumptions, allocations and requirements of the TMDL within any timeframes established in the TMDL. The **SWPPP** must include the provisions in Part III.A.7. If a specific numeric wasteload allocation has been established that would apply to the project's discharges, the **Permittee(s)** must incorporate that allocation into its **SWPPP** and implement necessary steps to meet that allocation.

PART II. SUBMITTING THE APPLICATION

A. PREREQUISITE FOR SUBMITTING A PERMIT APPLICATION

The **owner** must develop a **Storm Water Pollution Prevention Plan (SWPPP)** in accordance with Part III (Storm Water Discharge Design Requirements) of this permit. The plans are not to be submitted to the MPCA (unless the project size is 50 acres or more and will discharge to certain waters as described in Part II.B.1.b.) but are to be retained by the **owner** in accordance with Part III.D (Record Retention). The applicants' failure to complete the **SWPPP** prior to submitting the application will result in the application being returned and the **storm water** discharges associated with **construction activity** will not be authorized by this permit.

B. APPLICATION AND DURATION OF COVERAGE

1. Application Required.

- a. The **owner** and **operator** shall submit a completed application form (or a photocopy thereof) with the appropriate fee for project size (see application form) to the MPCA for each project which disturbs one (1) or more acres of land. The **owner** and **operator** of a **common plan of development or sale** that will ultimately disturb one (1) or more acres must submit a completed application to the MPCA.

- b. For certain projects or **common plans of development or sale** disturbing 50 acres or more, the application must be submitted at least 30 days before the start of construction activity. This requirement pertains to projects that have a discharge point on the project that is within 2000 feet of, and flows to, a special water listed in Appendix A, Part B. or waters listed as impaired under section 303(d) of the federal Clean Water Act (see MPCA's web site). Applicants must submit a completed application form and **Storm Water Pollution Prevention Plan** including all calculations for the Permanent Storm Water Management System (see Part III.A – C).
2. The **Owner** and **Operator** are **Permittee(s)**. The **owner** who signs the application is a **Permittee** and is responsible for compliance with all terms and conditions of this permit. The **operator** (usually the **general contractor**) who signs the application is a **Permittee** for Parts II.B., Part II.C. and Part IV. of this permit and is jointly responsible with the **owner** for compliance with those portions of the permit.
 3. Permit Coverage. The commencement of any **construction activity** (e.g., land disturbing activities) covered under Part I.A. of this permit is prohibited until permit coverage under this permit is effective or, if applicable, until the MPCA has issued an individual NPDES/SDS construction **storm water** permit for the project.
 - a. Except as provided in subp. 3.b. and 3.c. below, permit coverage will become effective seven (7) days after the postmarked date of the completed application form.
 - b. For projects disturbing 50 acres or more, that have a discharge point on the project that is within 2000 feet of, and flows to, a special water listed in Appendix A, Part B. or waters listed as impaired under section 303(d) of the federal Clean Water Act, the applicants must submit a completed application and **SWPPP** to the MPCA at least thirty (30) days prior to the commencement of construction activities. MPCA staff will review the **SWPPP** submitted with the completed application and unless the **Permittee** is notified in writing that the **SWPPP** does not meet the general permit requirements, permit coverage will become effective 30 days after the postmarked date or MPCA date-stamp (whichever is first) of the completed application.
 - c. For proposals to use Alternative Method(s) for the Permanent Storm Water Management System under Part III.C.5, the applicants must submit a completed application and **SWPPP**, including the Alternative Method documentation under Part III.C.5, to MPCA for review and approval at least 90 days prior to the proposed starting date of **construction activity**.
 - i. The MPCA will notify the applicant within the 90-day period, in writing, whether the alternative method is approved or not approved and, if applicable, the basis for denial.
 - ii. The applicant may re-submit the alternative method after addressing the MPCA's basis for denial. The MPCA will respond within 30 days.
 - iii. Permit coverage will become effective upon receipt of an alternative treatment method approval letter from MPCA. Any **construction activity** on the project is not covered under this permit until receiving the alternative treatment approval letter.
 4. Coverage Letter. For projects under subpart 3.a. of this part, the **Permittee(s)** will receive a permit letter and certificate acknowledging permit coverage, usually within 30 days of the postmarked date of the completed application.

5. Change of Coverage. For **storm water** discharges from construction projects where the **owner** or **operator** changes, (e.g., an original developer sells portions of the property to various homebuilders) the new **owner** or **operator** must submit a subdivision registration within 7 days of assuming operational control of the site, commencing work on their portion of the site, or of the legal transfer, sale or closing on the property. For instances where an **owner** or **operator** of an entire project changes after an application has been submitted under Part II, the new **owner** or **operator** must submit an application for permit transfer/modification within 7 days of assuming control of the site or commencing work on-site, or of the legal transfer, sale or closing on the property. Late submittals will not be rejected; however, the MPCA reserves the right to take enforcement for any unpermitted discharges or permit noncompliance for the new registered party that has assumed control of the site. For **storm water** discharges from construction activities where the **owner** or **operator** changes, the new **owner** or **operator** can implement the original **SWPPP** created for the project or develop and implement their own **SWPPP**. **Permittee(s)** shall ensure either directly or through coordination with other **Permittee(s)** that their **SWPPP** meets all terms and conditions of this permit and that their activities do not render another party's **erosion prevention** and **sediment control Best Management Practices (BMPs)**.”

C. TERMINATION OF COVERAGE

1. **Permittee(s)** wishing to terminate coverage under this permit must submit a **Notice of Termination (NOT)** to the MPCA. Compliance with this permit is required until a **NOT** is submitted. The **Permittee(s)** authorization to discharge under this permit terminates at midnight of the day the **NOT** is signed.
2. All **Permittee(s)** must submit a **NOT** within thirty (30) days after one or more of the following conditions have been met:
 - a. **Final stabilization** (see Part IV.G. and definition in Appendix B) has been achieved on all portions of the site for which the **Permittee** is responsible (including the removal of all temporary measures such as silt fence, and if applicable, returning agricultural land to its pre-construction agricultural use);
 - b. Another **owner/operator (Permittee)** has assumed control according to Part II.B.5 over all areas of the site that have not been finally **stabilized**; or
 - c. For residential construction only, **temporary erosion protection** and down gradient perimeter control for individual lots has been completed and the residence has been transferred to the homeowner. Additionally, the **Permittee** must distribute the MPCA's "**homeowner factsheet**" to the homeowner to inform the homeowner of the need for, and benefits of, **final stabilization**.
3. **Permittee(s)** that use an alternative method for the permanent **storm water** management system as described in Part III.C.5, are prohibited from terminating this permit until final stabilization has been achieved on site and either:
 - a. The two years of monitoring data has been submitted to the MPCA and the MPCA has determined that the required treatment has been achieved. The **Permittee** will be notified in writing within 30 days after the monitoring data has been submitted. If the **Permittee** has not heard from the MPCA within 30 days after submitting the required data, the **Permittee** can submit a **Notice of Termination**.

- b. The Permittee can submit a **Notice of Termination**, even if the timeframe is less than two years, if the MPCA determines that the alternative method is achieving the required treatment.

During the monitoring and evaluation of the alternative method, the **Permittee** is not responsible for other permit requirements that have been transferred as described in Part II.B.5.

PART III. STORM WATER DISCHARGE DESIGN REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN

The **owner** must develop a **Storm Water Pollution Prevention Plan (SWPPP)**. The **SWPPP** shall be completed prior to submitting any permit application and prior to conducting any **construction activity** by any required **Permittee(s)**. The plan must be a combination of narrative, plan sheets and if appropriate standard detail sheets that address the foreseeable conditions, at any stage in the construction or post construction activities. The plan must include a description of the nature of the **construction activity**. The plan must address the potential for discharge of sediment and/or other potential pollutants from the site. For **storm water** discharges from construction activities where the **owner** or **operator** changes, the new **owner** or **operator** can implement the original **SWPPP** created for the project or develop and implement their own **SWPPP**. **Permittee(s)** shall ensure either directly or through coordination with other **Permittee(s)** that their **SWPPP** meets all terms and conditions of this permit and that their activities do not render another party's **erosion prevention** and **sediment control Best Management Practices (BMPs)** ineffective.

1. As part of the **SWPPP** the **owner** must identify a person knowledgeable and experienced in the application of **erosion prevention** and **sediment control BMPs** who will oversee the implementation of the **SWPPP**, and the installation, inspection and maintenance of the **erosion prevention** and **sediment control BMPs** before and during construction. The **owner** must identify who will have the responsibility for long term operation and maintenance of the permanent **storm water** management system (see Part III.C.). The **owner** shall develop a chain of responsibility with all **operators** on the site to ensure that the **SWPPP** will be implemented and stay in effect until the construction project is complete, the entire site has undergone **final stabilization**, and a **NOT** has been submitted to the MPCA.
2. The **SWPPP** must incorporate the requirements of Part III (Storm Water Discharge Design Requirements), Part IV (Construction Activity Requirements) and Appendix A for the project. A narrative describing the timing for installation of all **erosion prevention** and **sediment control BMPs** required in Part III, Part IV and Appendix A must also be included in the plan.
3. The **SWPPP** requirements must be incorporated into the project's final plans and specifications and/or project documentation, as appropriate, and must include:
 - a. Location and type of all temporary and permanent **erosion prevention** and **sediment control BMPs** along with procedures to be used to establish additional temporary **BMPs** as necessary for the site conditions during construction. **Standard plates** and/or specifications for the **BMPs** used on the project must be included in the final plans and specifications for the project.
 - b. A site map with existing and final grades, including dividing lines and direction of flow for all pre and post-construction **storm water** runoff drainage areas located within the project limits. The site map must also include **impervious surfaces** and soil types.

- c. Locations of areas not to be disturbed.
 - d. Location of areas where construction will be phased to minimize duration of exposed soil areas.
 - e. All **surface waters** and existing **wetlands**, which can be identified on maps such as United States Geological Survey 7.5 minute quadrangle maps or equivalent maps within one-half mile from the project boundaries, which will receive **storm water** runoff from the construction site, during or after construction. Where **surface waters** receiving runoff associated with **construction activity** will not fit on the plan sheet, they must be identified with an arrow, indicating both direction and distance to the **surface water**.
 - f. Methods to be used for **final stabilization** of all exposed soil areas.
4. The **Permittee(s)** must amend the **SWPPP** as necessary to include additional requirements, such as additional or modified **BMPs**, designed to correct problems identified or address situations whenever:
- a. There is a change in design, construction, operation, maintenance, weather or seasonal conditions that has a significant effect on the discharge of pollutants to **surface waters** or **underground waters**;
 - b. Inspections or investigations by site **operators**, local, state or federal officials indicate the **SWPPP** is not effective in eliminating or significantly minimizing the discharge of pollutants to **surface waters** or **underground waters** or that the discharges are causing water quality standard exceedances; or
 - c. The **SWPPP** is not achieving the general objectives of controlling pollutants in **storm water** discharges associated with **construction activity**, or the **SWPPP** is not consistent with the terms and conditions of this permit.
 - d. At any time after permit coverage is effective, the MPCA may determine that the project's **storm water** discharges may cause, have reasonable potential to cause, or contribute to non-attainment of any applicable water quality standard, or that the **SWPPP** does not incorporate the requirements in Part III.A.7 related to an approved Total Maximum Daily Load (TMDL) implementation plan that contains construction **storm water** related requirements. If MPCA makes such determination(s) or any of the determinations in Parts III.A.4.a.-4.c., MPCA will notify the **Permittees** in writing. In response, the **Permittees** must develop a supplemental **BMP** action plan or appropriate **SWPPP** amendments describing **SWPPP** modifications to address the identified concerns and submit information requested by MPCA, which may include an individual permit application. If MPCA's written notification requires a response, failure to respond within the specified timeframe constitutes a permit violation.
5. The **SWPPP** must factor in any findings of and include any **storm water** mitigation measures required as the result of any environmental, archeological or other required local, state or federal review conducted for the project. For the purposes of this permit provision, mitigation measures mean avoiding, minimizing, rectifying (e.g., repairing, rehabilitating, restoring), reducing, eliminating or compensating for impacts related to: (1) **storm water** discharges associated with

the project's **construction activity**; and (2) **erosion prevention, sediment control** and the permanent **storm water** management system for the project.

6. The **SWPPP** must provide additional measures as necessary to assure compliance with surface and ground water standards in Minn. R. chapters 7050 and 7060 in karst areas and to ensure protection of drinking water supply management areas (see Minn. R. 4725.4450).
7. If runoff from the site discharges to an impaired water which has an approved TMDL implementation plan containing requirements for construction **storm water** discharges, the **Permittee** must include the following in the SWPPP:
 - a. identify the receiving water and the areas of the site discharging to it; and
 - b. BMPs that are appropriate for the site and sufficient to comply with all applicable requirements of the TMDL implementation plan.

B. TEMPORARY SEDIMENT BASINS

Where ten (10) or more acres of disturbed soil drain to a common location, a temporary (or permanent) sediment basin must be provided prior to the runoff leaving the construction site or entering **surface waters**. The **Permittee** is encouraged, but not required, to install temporary sediment basins where appropriate in areas with steep slopes or highly erodible soils even if less than ten (10) acres drains to one area. The basins must be designed and constructed according to the following requirements:

1. The basins must provide storage below the outlet pipe for a calculated volume of runoff from a 2 year, 24 hour storm from each acre drained to the basin, except that in no case shall the basin provide less than 1800 cubic feet of storage below the outlet pipe from each acre drained to the basin.
2. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage below the outlet pipe per acre drained to the basin, shall be provided where attainable until **final stabilization** of the site.
3. Temporary basin outlets must be designed to prevent short-circuiting and the discharge of floating debris. The basin must be designed with the ability to allow complete basin drawdown (e.g., perforated riser pipe wrapped with filter fabric and covered with crushed gravel, pumps or other means, see Part IV.D.) for maintenance activities, and provide a **stabilized** emergency overflow to prevent failure of pond integrity. **Energy dissipation** must be provided for the basin outlet (see Part IV.B.4).
4. The temporary (or permanent) basins must be constructed and made operational concurrent with the start of soil disturbance that is upgradient of the area and contributes runoff to the pond.
5. Where the temporary sediment basin is not attainable due to site limitations, equivalent **sediment controls** such as smaller sediment basins, and/or sediment traps, silt fences, vegetative buffer strips, or any appropriate combination of measures are required for all down slope boundaries of the construction area and for those side slope boundaries deemed appropriate as dictated by individual site conditions. In determining whether installing a sediment basin is attainable, the **Permittee** must consider public safety and may consider factors such as site soils, slope, and available area on site. This determination must be documented in the **SWPPP**.

C. PERMANENT STORM WATER MANAGEMENT SYSTEM

All **storm water** must be discharged in a manner that does not cause nuisance conditions, erosion in receiving channels or on downslope properties, or inundation in **wetlands** causing a significant adverse impact to the wetlands.

Where a project's ultimate development replaces vegetation and/or other pervious surfaces with one or more acres of cumulative **impervious surface**, a **water quality volume** of ½ inch of runoff from the new **impervious surfaces** created by the project must be treated by one of the methods outlined in Part III.C.1 through Part III.C.5 prior to the runoff leaving the construction site or entering **surface waters** (excluding drainage systems that convey **storm water** to a constructed permanent **storm water** management facility designed to treat the **water quality volume** from the project).

For those areas of a project where there is no feasible way to meet the treatment requirement for the **water quality volume**, other treatment such as grassed swales, smaller ponds or grit chambers is required prior to discharge to **surface waters**. A cumulative maximum of (3) three acres or 1% of project size whichever is larger can be treated in this manner.

Where the proximity to bedrock precludes the installation of any of the permanent **storm water** management practices outlined in Part III.C., other treatment, such as grassed swales, smaller ponds, or grit chambers, is required prior to discharge to **surface waters**.

For work on road projects where the lack of right of way precludes the installation of any of the permanent **storm water** management practices outlined in Part III.C., other treatment such as grassed swales, smaller ponds, or grit chambers, is required prior to discharge to **surface waters**.

1. Wet Sedimentation Basin

- a. The basin must have a permanent volume of 1800 cubic feet of storage below the outlet pipe for each acre that drains to the basin. The basin's permanent volume must reach a minimum depth of at least 3 feet and must have no depth greater than 10 feet. The basin must be configured such that scour or resuspension of solids is minimized.
- b. The basin's **water quality volume** is calculated as ½ inch of runoff from the new **impervious surfaces** created by the project.
- c. Basin outlets shall be designed such that the **water quality volume** is discharged at no more than 5.66 cubic feet per second (cfs) per acre of surface area of the pond.
- d. Basin outlets must be designed to prevent short-circuiting and the discharge of floating debris. Basin outlets must have **energy dissipation**.
- e. The basin must provide a **stabilized** emergency overflow to accommodate storm events in excess of the basin's hydraulic design.
- f. Adequate maintenance access must be provided (typically 8 ft. wide) for future maintenance of the basin.

2. Infiltration/Filtration

Infiltration/Filtration options include but are not limited to: infiltration basins, infiltration trenches, rainwater gardens, sand filters, organic filters, bioretention areas, enhanced swales, dry storage ponds with underdrain discharge, off-line retention areas and natural depressions. Infiltration must be used only as appropriate to the site and land uses. Settleable solids, floating materials, oils and grease should be removed from the runoff to the maximum extent practicable before runoff enters the infiltration/filtration system. Filtration systems must have a reasonable chance of achieving approximately 80% removal of total suspended solids. The **Permittee(s)** must evaluate the impact of constructing an infiltration practice on existing hydrologic features (e.g., existing **wetlands**) and try to maintain pre-existing conditions (e.g., do not breach a perched water table which is supporting a **wetland**). For a discussion of ground water warnings, design measures, maintenance considerations or other retention, detention, and treatment devices, see the MPCA's **Protecting Water Quality in Urban Areas** found on the MPCA's web-site.

- a. Infiltration systems should not be excavated to final grade until the contributing drainage area has been constructed and fully **stabilized**.
 - b. During construction of an infiltration system, rigorous sediment and erosion controls (e.g., diversion berms) should be used to keep sediment and runoff completely away from the infiltration area. The area must be staked off and marked so that heavy construction equipment will not compact the soil in the proposed infiltration area.
 - c. To prevent clogging of the infiltration or filtration system, a pretreatment device such as a vegetated filter strip, small sedimentation basin, or water quality inlet (e.g., grit chamber) must be used to settle particulates before the **storm water** discharges into the infiltration or filtration system.
 - d. Infiltration or filtration systems shall be sufficient to infiltrate or filter a **water quality volume** of ½ inch of runoff from the new **impervious surfaces** created by the project.
 - e. The **water quality volume** shall discharge through the soil or filter media in 48 hours or less. Additional flows that cannot be infiltrated or filtered in 48 hours should be routed to bypass the system through a **stabilized** discharge point. A way to visually verify that the system is operating as designed must be provided.
 - f. Appropriate on-site testing shall be conducted to ensure a minimum of 3 feet of separation from the seasonally **saturated soils** (or from bedrock) and the bottom of the proposed infiltration system. Calculations and computer model results that demonstrate the design adequacy of the infiltration system must be included as part of the **SWPPP**.
 - g. Adequate maintenance access must be provided (typically 8 ft. wide) along with a maintenance plan identifying whom will be performing future maintenance of the infiltration or filtration system.
 - h. Use of designed infiltration systems from industrial areas with exposed significant materials or from vehicle fueling and maintenance areas is prohibited.
3. Regional Ponds

Regional ponds can be used provided that they are constructed ponds, not a natural **wetland** or waterbody, (**wetlands** used as regional ponds must be mitigated for, see Appendix A) and designed in accordance with this permit's design requirements (see Part III.C.1) for all water from

impervious surfaces that reach the pond. **Permittees** shall not construct regional ponds in **wetlands**, regardless of their condition, quality or designation by local plans, unless the mitigative sequence in Appendix A. D.2 of this permit has been completed. There must be no significant degradation of the waterways between the project and the regional pond. The **owner** must obtain written authorization from the applicable local governmental unit (LGU) or private entity that owns and maintains the regional pond. The LGU's or private entity's written authorization must identify that the regional pond will discharge the **water quality volume** (½ inch of runoff from the impervious watershed area) at no more than 5.66 cfs per acre of surface area of the pond. The **owner** must include the LGU's or private entity's written authorization in the **SWPPP**. The LGU's or private entity's written authorization must be obtained before the **owner** finalizes the **SWPPP** and before any application for this permit is made to the MPCA.

4. Combination of Practices

A combination of practices, including those required by a LGU, which meet the requirements of Part III.C.1, 2 and 3 respectively, (i.e., wet sedimentation basins, infiltration/filtration, and regional ponds) may be used such that the **water quality volume** of ½ inch of runoff from the new **impervious surfaces** created by the project is accounted for in the **owner's** permanent **storm water** management system (e.g., ¼ inch infiltrated and ¼ inch treated through a wet sedimentation basin). If any combination of these practices is used, the **SWPPP** must contain documentation (e.g., LGU or private entity's authorization, infiltration computer model results or calculations, etc.) identifying the volume that each practice addresses.

5. Alternative Method

Where an alternative, innovative treatment system is proposed and demonstrated by calculation, design or other independent methods to achieve approximately 80% removal of total suspended solids on an annual average basis, the **Commissioner** will approve the method if the process outlined in Part II.B.3.c. is completed, and the following information is submitted:

- a. All calculations, drainage areas, plans, and specifications for the proposed alternative method and a graphic representation of the area to be served by the method. These items must be included in the **SWPPP** and submitted to the MPCA at least 90 days prior to the proposed starting date of the **construction activity**.
- b. A 2 year monitoring plan to sample runoff from the proposed method. The plan must include a discussion of the methods used to collect samples, location where samples will be taken (upstream and downstream of the proposed method), frequency of samples (minimum of six runoff events sampled), identify lab used to analyze the samples and quality assurance and quality control methods to be used. The plan must include a schedule for submitting the monitoring data annually.
- c. A mitigation plan that addresses how the **water quality volume** will be treated in the event that the monitoring data shows the proposed alternative treatment method does not function as designed.
- d. The alternative method must achieve approximately 80% removal of total suspended solids on an average annual basis for the conditions expected at the site. The design must also consider public safety, health and water quality concerns. Proprietary information on effectiveness will not be considered for alternative treatment method review and approval.

No **construction activity** on the project is covered under this permit until the applicant receives an alternative treatment approval letter from the MPCA as described in Part II.B.3.c.

D. RECORD RETENTION

The **SWPPP**, all changes to it, and inspections and maintenance records must be kept at the site during construction by the **Permittee** who has operational control of that portion of the site. The **SWPPP** can be kept in either the field office or in an on site vehicle.

All **owner(s)** must keep the **SWPPP**, along with the following additional records, on file for three years after submittal of the **NOT** as outlined in Part II.C. This does not include any records after submittal of the **NOT**.

1. Any other permits required for the project;
2. Records of all inspection and maintenance conducted during construction (see Part IV.E. Inspections and Maintenance);
3. All permanent operation and maintenance agreements that have been implemented, including all right of way, contracts, covenants and other binding requirements regarding perpetual maintenance; and
4. All required calculations for design of the temporary and permanent **storm water** management systems.

PART IV. CONSTRUCTION ACTIVITY REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN

The **Permittee(s)** must implement the **SWPPP** and the requirements of this part. The **Best Management Practices (BMPs)** identified in the **SWPPP** and in this permit must be installed in an appropriate and functional manner.

B. EROSION PREVENTION PRACTICES

1. The **Permittee(s)** must plan for and implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices that minimize erosion, so that the inspection and maintenance requirements of Part IV.E. are complied with. The location of areas not to be disturbed must be delineated (e.g. with flags, stakes, signs, silt fence etc.) on the development site before work begins.
2. All exposed soil areas with a continuous positive slope within 200 lineal feet of a **surface water**, must have **temporary erosion protection** or **permanent cover** for the exposed soil areas year round, according to the following table of slopes and time frames:

<u>Type of Slope</u>	<u>Time</u>	(Maximum time an area can remain open when the area is not actively being worked.)
Steeper than 3:1	7 days	
10:1 to 3:1	14 days	
Flatter than 10:1	21 days	

These areas include constructed **storm water** management pond side slopes, and any exposed soil areas with a positive slope to a **storm water** conveyance system, such as a curb and gutter system, storm sewer inlet, temporary or permanent drainage ditch or other natural or man made systems that discharge to a **surface water**. Temporary stockpiles without significant silt, clay or organic components (e.g., clean aggregate stockpiles, demolition concrete stockpiles, sand stockpiles) are exempt from this requirement but must comply with Part IV.C.5.

3. The **normal wetted perimeter** of any temporary or permanent drainage ditch that drains water from a construction site, or diverts water around a site, must be **stabilized** within 200 lineal feet from the property edge, or from the point of discharge to any **surface water**. Stabilization must be completed within 24 hours of connecting to a **surface water**.
4. Pipe outlets must be provided with temporary or permanent **energy dissipation** within 24 hours of connection to a **surface water**.

C. SEDIMENT CONTROL PRACTICES

1. **Sediment control** practices must minimize sediment from entering **surface waters**, including curb and gutter systems and storm sewer inlets.
 - a. Temporary or permanent drainage ditches and sediment basins that are designed as part of a treatment system (e.g., ditches with rock check dams) require **sediment control** practices only as appropriate for site conditions.
 - b. If the down gradient treatment system is overloaded, additional upgradient **sediment control** practices must be installed to eliminate the overloading, and the **SWPPP** must be amended to identify these additional practices as required in Part III.A.4, a. through c.
 - c. In order to maintain sheet flow and minimize rills and/or gullies, there shall be no unbroken slope length of greater than 75 feet for slopes with a grade of 3:1 or steeper.
2. **Sediment control** practices must be established on all down gradient perimeters before any upgradient land disturbing activities begin. These practices shall remain in place until **final stabilization** has been established in accordance with Part IV.G.
3. The timing of the installation of **sediment control** practices may be adjusted to accommodate short-term activities such as clearing or grubbing, or passage of vehicles. Any short-term activity must be completed as quickly as possible and the **sediment control** practices must be installed immediately after the activity is completed. However, **sediment control** practices must be installed before the next precipitation event even if the activity is not complete.
4. All storm drain inlets must be protected by appropriate **BMPs** during construction until all sources with potential for discharging to the inlet have been **stabilized**.
5. Temporary soil stockpiles must have silt fence or other effective **sediment controls**, and cannot be placed in **surface waters**, including **storm water** conveyances such as curb and gutter systems, or conduits and ditches.
6. Vehicle tracking of sediment from the construction site must be minimized by **BMPs** such as stone pads, concrete or steel wash racks, or equivalent systems. Street sweeping must be used if

such **BMPs** are not adequate to prevent sediment from being tracked onto the street (see Part IV.E.4.d.).

7. The **Permittee** must install temporary sedimentation basins as required in Part III.B. of this permit.

D. DEWATERING AND BASIN DRAINING

1. **Dewatering** or basin draining (e.g., pumped discharges, trench/ditch cuts for drainage) related to the **construction activity** that may have turbid or sediment laden discharge water must be discharged to a temporary or permanent sedimentation basin on the project site whenever possible. If the water cannot be discharged to a sedimentation basin prior to entering the **surface water**, it must be treated with the appropriate **BMPs**, such that the discharge does not adversely affect the receiving water or downstream landowners. The **Permittee(s)** must ensure that discharge points are adequately protected from erosion and scour. The discharge must be dispersed over natural rock riprap, sand bags, plastic sheeting or other accepted **energy dissipation** measures. Adequate sedimentation control measures are required for discharge water that contains suspended solids.
2. All water from **dewatering** or basin draining activities must be discharged in a manner that does not cause nuisance conditions, erosion in receiving channels or on downslope properties, or inundation in **wetlands** causing significant adverse impact to the **wetland**.

E. INSPECTIONS AND MAINTENANCE

1. The **Permittee(s)** (either the **owner** or **operator**, whoever is identified in the **SWPPP**) must routinely inspect the construction site once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours.
2. All inspections and maintenance conducted during construction must be recorded in writing and these records must be retained with the **SWPPP** in accordance with Part III.D. Records of each inspection and maintenance activity shall include:
 - a. Date and time of inspections;
 - b. Name of person(s) conducting inspections;
 - c. Findings of inspections, including recommendations for corrective actions;
 - d. Corrective actions taken (including dates, times, and party completing maintenance activities);
 - e. Date and amount of all rainfall events greater than 1/2 inch (0.5 inches) in 24 hours; and
 - f. Documentation of changes made to the **SWPPP** as required in Part III.A.4.
3. Where parts of the construction site have undergone **final stabilization**, but work remains on other parts of the site, inspections of the **stabilized** areas may be reduced to once per month. Where work has been suspended due to frozen ground conditions, the required inspections and maintenance must take place as soon as runoff occurs at the site or prior to resuming construction, whichever comes first.

4. All **erosion prevention** and **sediment control BMPs** must be inspected to ensure integrity and effectiveness. All nonfunctional **BMPs** must be repaired, replaced, or supplemented with functional **BMPs**. The **Permittee(s)** must investigate and comply with the following inspection and maintenance requirements:
 - a. All silt fences must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 of the height of the fence. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access.
 - b. Temporary and permanent sedimentation basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches 1/2 the storage volume. Drainage and removal must be completed within 72 hours of discovery, or as soon as field conditions allow access (see Part IV.D.).
 - c. **Surface waters**, including drainage ditches and conveyance systems, must be inspected for evidence of sediment being deposited by erosion. The **Permittee(s)** must remove all deltas and sediment deposited in **surface waters**, including drainage ways, catch basins, and other drainage systems, and restabilize the areas where sediment removal results in exposed soil. The removal and stabilization must take place within seven (7) days of discovery unless precluded by legal, regulatory, or physical access constraints. The **Permittee** shall use all reasonable efforts to obtain access. If precluded, removal and stabilization must take place within seven (7) calendar days of obtaining access. The **Permittee** is responsible for contacting all local, regional, state and federal authorities and receiving any applicable permits, prior to conducting any work.
 - d. Construction site vehicle exit locations must be inspected for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all off-site paved surfaces, within 24 hours of discovery, or if applicable, within a shorter time to comply with Part IV.C.6.
 - e. The **Permittee(s)** are responsible for the operation and maintenance of temporary and permanent water quality management **BMPs**, as well as all **erosion prevention** and **sediment control BMPs**, for the duration of the construction work at the site. The **Permittee(s)** are responsible until another **Permittee** has assumed control according to Part II.B.5 over all areas of the site that have not been finally **stabilized** or the site has undergone **final stabilization**, and a **NOT** has been submitted to the MPCA.
 - f. If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts (e.g., fugitive sediment in streets could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets).
5. All infiltration areas must be inspected to ensure that no sediment from ongoing **construction activities** is reaching the infiltration area and these areas are protected from compaction due to construction equipment driving across the infiltration area.

F. POLLUTION PREVENTION MANAGEMENT MEASURES

The **Permittee(s)** shall implement the following pollution prevention management measures on the site:

1. Solid Waste: Collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with MPCA disposal requirements.
2. Hazardous Materials: Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA regulations.
3. External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.

G. FINAL STABILIZATION

The **Permittee(s)** must ensure **final stabilization** of the site. The **Permittee(s)** must submit a **NOT** within 30 days after **final stabilization** is complete, or another **owner/operator (Permittee)** has assumed control according to Part II.B.5 over all areas of the site that have not undergone **final stabilization**. **Final stabilization** can be achieved in one of the following ways:

1. All soil disturbing activities at the site have been completed and all soils must be **stabilized** by a uniform perennial vegetative cover with a density of 70 percent over the entire pervious surface area, or other equivalent means necessary to prevent soil failure under erosive conditions and;
 - a. All drainage ditches, constructed to drain water from the site after construction is complete, must be **stabilized** to preclude erosion;
 - b. All temporary synthetic, and structural **erosion prevention** and **sediment control BMPs** (such as silt fence) must be removed as part of the site **final stabilization**; and
 - c. The **Permittee(s)** must clean out all sediment from conveyances and from temporary sedimentation basins that are to be used as permanent water quality management basins. Sediment must be **stabilized** to prevent it from being washed back into the basin, conveyances or drainageways discharging off-site or to **surface waters**. The cleanout of permanent basins must be sufficient to return the basin to design capacity.
2. For residential construction only, **final stabilization** has been achieved when **temporary erosion protection** and down gradient perimeter control for individual lots has been completed and the residence has been transferred to the homeowner. Additionally, the **Permittee** must distribute the MPCA "**homeowner factsheet**" to the homeowner to inform the homeowner of the need for, and benefits of, **final stabilization**.

PART V. GENERAL PROVISIONS

A. APPLICABILITY CRITERIA

1. If the **Commissioner** determines that **storm water** discharges associated with a **construction activity** are contributing to a violation of a water quality standard or would be more appropriately regulated by an individual permit, the **Commissioner** may require the **owner** to be covered by an individual **storm water** discharge permit. The **Commissioner** may require the **owner** to develop

and implement specific **BMPs** and monitor the discharge from the site. If applicable, upon issuance of an individual permit, this general permit would no longer apply.

2. If the terms and conditions of this general permit cannot be met, an **owner** may request an individual permit, in accordance with Minn. R. 7001.

B. RESPONSE

The **SWPPP**, including all certificates, reports, records, or other information required by this permit, must be made available to federal, state, and local officials within 72 hours upon request for the duration of the permit and for three years following the **NOT**. This does not include any records after submittal of the **NOT**.

C. PROHIBITIONS

This permit prohibits discharges of any material other than **storm water**, and discharges from **dewatering** or basin draining activities in accordance with Part IV.D.1 and 2. For example, prohibited discharges include but are not limited to vehicle and equipment washing, maintenance spills, wash water, and discharges of oil and other hazardous substances.

D. TRANSFER OF OWNERSHIP OR CONTROL

This permit may not be assigned or transferred by the permit holder except when transfer occurs in accordance with the applicable requirements of Part II.B.5.

E. CIVIL AND CRIMINAL LIABILITY

Nothing in this permit must be construed to relieve the **Permittee(s)** from civil or criminal penalties for noncompliance with the terms and conditions provided herein. Nothing in this permit must be construed to preclude the initiation of any legal action or relieve the **Permittee(s)** from any responsibilities, liabilities, or penalties to which the **Permittee(s)** is or may be subject to under Section 311 of the Act and Minn. Stat. chs. 115 and 116, as amended. The **Permittee(s)** are not liable for permit requirements for activities occurring on those portions of a site where another party has submitted a subdivision short form registration as described in Part II. B.5 or a **NOT** has been issued by the MPCA except for responsibilities listed under Part III.C.5 if applicable.

F. SEVERABILITY

The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit must not be affected thereby.

G. NPDES/SDS RULE STANDARD CONDITIONS

The **Permittee(s)** must comply with the provisions of Minn. R. 7001.0150, subp. 3 and 7001.1090, subp. 1.A,B,C,H,I. This permit does not require the submittal of a data monitoring report, except where monitoring is required in Part III.C.5.

H. INSPECTION AND ENTRY

The **Permittee(s)** must comply with the provisions of 40 CFR 122.41(i), Minn. Stat. Ch. 115.04 and Minn. Stat. Ch. 115B.17. The **Permittee(s)** shall allow representatives of the MPCA or any member, employee or agent thereof, when authorized by it, upon presentation of credentials, to enter upon any property, public or private, for the purpose of obtaining information or examination of records or conducting surveys or investigations.

APPENDIX A

A. GENERAL REQUIREMENTS

All requirements in this Appendix are in addition to **BMPs** already specified in the permit. Where provisions of Appendix A conflict with requirements elsewhere in the permit, the provisions in Appendix A take precedence. All **BMPs** used to comply with this Appendix must be documented in the **SWPPP** for the project. If the terms and conditions of this Appendix cannot be met, an individual permit will be required in accordance with Minn. R. ch. 7001.

B. REQUIREMENTS FOR DISCHARGES TO SPECIAL WATERS

Additional **BMPs** together with enhanced runoff controls, are required for discharges to the following special waters (part B.1 through B.8 of Appendix A). The **BMPs** identified for each special water are required for those areas of the project draining to a discharge point on the project that is within 2000 feet of a special water and flows to that special water.

1. **Wilderness areas:** Boundary Waters Canoe Area Wilderness; Voyageurs National Park; Kettle River from the site of the former dam at Sandstone to its confluence with the Saint Croix River; Rum River from Ogechie Lake spillway to the northernmost confluence with Lake Onamia. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2, C.3 and C.4 of this appendix.
2. **Mississippi River:** Those portions from Lake Itasca to the southerly boundary of Morrison County that are included in the Mississippi Headwaters Board comprehensive plan dated February 12, 1981. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2 and C.3 of this appendix.
3. **Scenic or recreational river segments:** Saint Croix river, entire length; Cannon River from northern city limits of Faribault to its confluence with the Mississippi River; North Fork of the Crow River from Lake Koronis outlet to the Meeker-Wright county line; Kettle River from north Pine County line to the site of the former dam at Sandstone; Minnesota River from Lac qui Parle dam to Redwood County state aid highway 11; Mississippi River from county state aid highway 7 bridge in Saint Cloud to northwestern city limits of Anoka; and Rum River from state aid Highway 27 bridge in Onamia to Madison and Rice streets in Anoka. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2 and C.3 of this appendix.
4. **Lake Superior:** (prohibited and restricted) Discharges to Lake Superior must incorporate the **BMPs** outlined in C.1, C.2 and C.3 of this appendix.
5. **Lake Trout Lakes:** Identified in Minn. R. 7050.0470, including those inside the boundaries of the Boundary Waters Canoe Area Wilderness and Voyageurs National Park. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2, C.3 and C.4 of this appendix.

6. **Trout Lakes:** identified in Minn. R. 6264.0050, subp. 2. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2, C.3, and C.4 of this appendix.
7. **Scientific and natural areas:** Boot Lake, Anoka County; Kettle River in sections 15, 22, 23, T 41 N, R 20, Pine County; Pennington Bog, Beltrami County; Purvis Lake-Ober Foundation, Saint Louis County; Waters within the borders of Itasca Wilderness Sanctuary, Clearwater County; Iron Springs Bog, Clearwater County; Wolsfeld Woods, Hennepin County; Green Water Lake, Becker County; Blackdog Preserve, Dakota County; Prairie Bush Clover, Jackson County; Black Lake Bog, Pine County; Pembina Trail Preserve, Polk County; and Falls Creek, Washington County. Discharges to these waters must incorporate the **BMPs** outlined in C.1, C.2, C.3 and C.4 of this appendix.
8. **Trout Streams:** listed in Minn. R. 6264.0050, subp. 4. Discharges to these waters must incorporate the **BMPs** outlined in Appendix A C.1, C.2, C.3, and C.5 of this appendix.

C. ADDITIONAL BMPS FOR SPECIAL WATERS

For the BMPs described in C.2, C.4 and C.5 of this Appendix:

Where the proximity to bedrock precludes the installation of any of the permanent **storm water** management practices outlined in Appendix A, other treatment such as grassed swales, smaller ponds, or grit chambers is required prior to discharge to **surface waters**.

For work on road projects where the lack of right of way precludes the installation of any of the permanent **storm water** management practices outlined in Appendix A, other treatment such as grassed swales, smaller ponds, or grit chambers is required prior to discharge to **surface waters**.

1. During construction.
 - a. All exposed soil areas with a slope of 3:1 or steeper, that have a continuous positive slope to a special water must have **temporary erosion protection** or **permanent cover** within 3 days after the area is no longer actively being worked. All other slopes that have a continuous positive slope to a special water must have **temporary erosion protection** or **permanent cover** within 7 days after the area is no longer actively being worked.
 - b. Temporary sediment basin requirements described in Part III.B.1-5 must be used for common drainage locations that serve an area with five (5) or more acres disturbed at one time.
2. Post construction. The **water quality volume** that must be treated by the project's permanent **storm water** management system described in Part III.C. shall be one (1) inch of runoff from the new **impervious surfaces** created by the project.
3. Buffer zone. An undisturbed buffer zone of not less than 100 linear feet from the special water (not including tributaries) shall be maintained at all times. Exceptions from this requirement for areas, such as water crossings or limited water access, are allowed if the **Permittee** fully documents in the **SWPPP** the circumstances and reasons that the buffer encroachment is necessary. All potential water quality, scenic and other environmental impacts of these exceptions must be minimized and documented in the **SWPPP** for the project.

4. Enhanced runoff controls. The permanent **storm water** management system must be designed such that the pre and post project runoff rate and volume from the 1, and 2-year 24-hour precipitation events remains the same.
5. Temperature Controls. The permanent **storm water** management system must be designed such that the discharge from the project will minimize any increase in the temperature of trout stream receiving waters resulting from the 1, and 2-year 24-hour precipitation events. This includes all tributaries of designated trout streams within the section that the trout stream is located. Projects that discharge to trout streams must minimize the impact using one or more of the following measures, in order of preference:
 - a. Minimize new **impervious surfaces**.
 - b. Minimize the discharge from connected **impervious surfaces** by discharging to vegetated areas, or grass swales, and through the use of other non-structural controls.
 - c. Infiltration or evapotranspiration of runoff in excess of pre-project conditions (up to the 2-year 24-hour precipitation event).
 - d. If ponding is used, the design must include an appropriate combination of measures such as shading, filtered bottom withdrawal, vegetated swale discharges or constructed **wetland** treatment cells that will limit temperature increases. The pond should be designed to draw down in 24 hours or less.
 - e. Other methods that will minimize any increase in the temperature of the trout stream.

D. REQUIREMENTS FOR DISCHARGING TO WETLANDS

If the project has any **storm water** discharges with the potential for significant adverse impacts to a **wetland** (e.g., conversion of a natural **wetland** to a **storm water** pond), the **Permittee(s)** must demonstrate that the **wetland** mitigative sequence has been followed in accordance with D.1 or D.2 of this appendix.

1. If the potential adverse impacts to a **wetland** on a specific project site have been addressed by permits or other approvals from an official statewide program (U.S. Army Corps of Engineers 404 program, Minnesota Department of Natural Resources, or the State of Minnesota Wetland Conservation Act) that are issued specifically for the project and project site, the **Permittee** may use the permit or other determination issued by these agencies to show that the potential adverse impacts have been addressed. For the purposes of this permit, de minimus actions are determinations by the permitting agency that address the project impacts, whereas a non-jurisdictional determination does not address project impacts.
2. If there are impacts from the project that are not addressed in one of the permits or other determinations discussed in Appendix A, Part D.1 (e.g., permanent inundation or flooding of the **wetland**, significant degradation of water quality, excavation, filling, draining), the **Permittee** must minimize all adverse impacts to **wetlands** by utilizing appropriate measures. Measures used must be based on the nature of the **wetland**, its vegetative community types and the established hydrology. These measures include in order of preference:
 - a. Avoid all significant adverse impacts to **wetlands** from the project and post project discharge.
 - b. Minimize any unavoidable impacts from the project and post project discharge.
 - c. Provide compensatory mitigation when the **Permittee** determines that there is no reasonable and practicable alternative to having a significant adverse impact on a **wetland**. For

compensatory mitigation, wetland restoration or creation shall be of the same type, size and whenever reasonable and practicable in the same watershed as the impacted wetland.

E. DISCHARGES REQUIRING ENVIRONMENTAL REVIEW

This permit does not replace or satisfy any environmental review requirements, including those under the Minnesota Environmental Policy Act (MEPA) or the National Environmental Policy Act (NEPA). The **owner** must complete any environmental review required by law, including any required Environmental Assessment Work Sheets or Environmental Impact Statements, Federal environmental review, or other required review.

F. DISCHARGES AFFECTING ENDANGERED OR THREATENED SPECIES

This permit does not replace or satisfy any review requirements for Endangered or Threatened species, from new or **expanded discharges** that adversely impact or contribute to adverse impacts on a listed endangered or threatened species or adversely modify a designated critical habitat. The **owner** must conduct any required review and coordinate with appropriate agencies for any project with the potential of affecting threatened or endangered species, or their critical habitat.

G. DISCHARGES AFFECTING HISTORIC PLACES OR ARCHEOLOGICAL SITES

This permit does not replace or satisfy any review requirements for Historic Places or Archeological Sites, from new or **expanded discharges** which adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered Archeological Sites. The **owner** must be in compliance with National Historic Preservation Act and conduct all required review and coordination related to historic preservation, including significant anthropological sites and any burial sites, with the Minnesota Historic Preservation Officer.

APPENDIX B. DEFINITIONS

1. "**Best Management Practices (BMPs)**" means erosion and **sediment control** and water quality management practices that are the most effective and practicable means of controlling, preventing, and minimizing degradation of **surface water**, including avoidance of impacts, construction-phasing, minimizing the length of time soil areas are exposed, prohibitions, and other management practices published by state or designated area-wide planning agencies.

Individual **BMPs** found in this permit are described in the current version of **Protecting Water Quality in Urban Areas**, Minnesota Pollution Control Agency 2000. **BMPs** must be adapted to the site and can be adopted from other sources. However, they must be similar in purpose and at least as effective and stringent as MPCA's **BMPs**. (Other sources include manufacturers specifications, **Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices**, U.S. Environmental Protection Agency 1992, and **Erosion Control Design Manual**, Minnesota Department of Transportation, et al, 1993).

2. "**Commissioner**" means the **Commissioner** of the Minnesota Pollution Control Agency or the **Commissioner's** designee.
3. "**Common Plan of Development or Sale**" means a contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but

under one proposed plan. One plan is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur.

4. "**Construction Activity**" For this permit, **construction activity** includes **construction activity** as defined in 40 C.F.R. part 122.26(b)(14)(x) and **small construction activity** as defined in 40 C.F.R. part 122.26(b)(15). This includes a disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated **storm water** runoff, leading to soil erosion and movement of sediment into **surface waters** or drainage systems. Examples of construction activity may include clearing, grading, filling and excavating. **Construction activity** includes the disturbance of less than one acre of total land area that is a part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb one (1) acre or more.
5. "**Dewatering**" means the removal of water for **construction activity**. It can be a discharge of appropriated surface or groundwater to dry and/or solidify a construction site. It may require Minnesota Department of Natural Resources permits to be appropriated and if contaminated may require other MPCA permits to be discharged.
6. "**Energy Dissipation**" means methods employed at pipe outlets to prevent erosion. Examples include, but are not limited to: concrete aprons, riprap, splash pads, and gabions that are designed to prevent erosion.
7. "**Erosion Prevention**" means measures employed to prevent erosion including but not limited to: soil stabilization practices, limited grading, mulch, temporary or **permanent cover**, and construction phasing.
8. "**Final Stabilization**" means that either:
 - a. All soil disturbing activities at the site have been completed and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed;
 - b. For individual lots in residential construction by either: (a) The homebuilder completing **final stabilization** as specified above, or (b) the homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, **final stabilization**. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to **final stabilization** as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or
 - c. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land) **final stabilization** may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to **surface waters** and drainage systems, and areas which are not being returned to their preconstruction agricultural use must meet the **final stabilization** criteria in (a) or (b) above.
9. "**General Contractor**" means the party who signs the construction contract with the **owner** to construct the project described in the final plans and specifications. Where the construction project involves more than one contractor, the **general contractor** will be the party responsible for managing

the project on behalf of the **owner**. In some cases, the **owner** may be the **general contractor**. In these cases, the **owner** may contract an individual as the **operator** who would become the Co-Permittee.

10. "**Homeowner Factsheet**" means a fact sheet developed by the MPCA to be given to homeowners at the time of sale by a builder to inform the homeowner of the need for, and benefits of, **final stabilization**.
11. "**Impervious Surface**" means a constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. Examples include rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads.
12. "**National Pollutant Discharge Elimination System (NPDES)**" means the program for issuing, modifying, revoking, reissuing, terminating, monitoring, and enforcing permits under the Clean Water Act (Sections 301, 318, 402, and 405) and United States Code of Federal Regulations Title 33, Sections 1317, 1328, 1342, and 1345..
13. "**Normal Wetted Perimeter**" means the area of a conveyance, such as a ditch, channel, or pipe that is in contact with water during flow events that are expected to occur once every year.
14. "**Notice of Termination**" means notice to terminate coverage under this permit after construction is complete, the site has undergone **final stabilization**, and maintenance agreements for all permanent facilities have been established, in accordance with all applicable conditions of this permit. **Notice of Termination** forms are available from the MPCA.
15. "**Operator**" means the person (usually the **general contractor**), designated by the **owner**, who has day to day operational control and/or the ability to modify project plans and specifications related to the **SWPPP**. The person must be knowledgeable in those areas of the permit for which the **operator** is responsible, (Part II.B. and Part IV.) and must perform those responsibilities in a workmanlike manner.
16. "**Owner**" means the person or party possessing the title of the land on which the construction activities will occur; or if the **construction activity** is for a lease holder, the party or individual identified as the lease holder; or the contracting government agency responsible for the **construction activity**.
17. "**Permanent Cover**" means **final stabilization**. Examples include grass, gravel, asphalt, and concrete.
18. "**Permittee**" means a person or persons, firm, or governmental agency or other institution that signs the application submitted to the MPCA and is responsible for compliance with the terms and conditions of this permit.
19. "**Saturated Soil**" means the highest seasonal elevation in the soil that is in a reduced chemical state because of soil voids being filled with water. **Saturated soil** is evidenced by the presence of redoximorphic features or other information.
20. "**Sediment Control**" means methods employed to prevent sediment from leaving the site. **Sediment control** practices include silt fences, sediment traps, earth dikes, drainage swales, check dams, subsurface drains, pipe slope drains, storm drain inlet protection, and temporary or permanent

sedimentation basins.

21. “**Small Construction Activity**” means small construction activity as defined in 40 C.F.R. part 122.26(b)(15) . Small construction activities include clearing, grading and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. **Small construction activity** includes the disturbance of less than one (1) acre of total land area that is part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb equal to or greater than one and less than five (5) acres.
22. “**Stabilized**” means the exposed ground surface has been covered by appropriate materials such as mulch, staked sod, riprap, wood fiber blanket, or other material that prevents erosion from occurring. Grass seeding is not stabilization.
23. “**Standard Plates**” means general drawings having or showing similar characteristics or qualities that are representative of a construction practice or activity.
24. “**Storm water**” is defined under Minn. R. 7077.0105, subp. 41(b), and includes precipitation runoff, **storm water** runoff, snow melt runoff, and any other surface runoff and drainage.
25. “**Storm Water Pollution Prevention Plan**” means a plan for **storm water** discharge that includes **erosion prevention** measures and **sediment controls** that, when implemented, will decrease soil erosion on a parcel of land and decrease off-site nonpoint pollution.
26. “**Surface Water or Waters**” means all streams, lakes, ponds, marshes, **wetlands**, reservoirs, springs, rivers, drainage systems, waterways, watercourses, and irrigation systems whether natural or artificial, public or private.
27. “**Temporary Erosion Protection**” means methods employed to prevent erosion. Examples of temporary cover include; straw, wood fiber blanket, wood chips, and erosion netting.
28. “**Underground Waters**” means water contained below the surface of the earth in the saturated zone including, without limitation, all waters whether under confined, unconfined, or perched conditions, in near surface unconsolidated sediment or regolith, or in rock formations deeper underground. The term ground water shall be synonymous with underground water.
29. “**Waters of the State**” (as defined in Minn. Stat. § 115.01, subd. 22) means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof.
30. “**Water Quality Volume**” means ½ inch of runoff from the new **impervious surfaces** created by this project and is the volume of water to be treated in the permanent **storm water** management system, as required by this permit except as provided in Appendix A.C.2.
31. “**Wetland**” or “**Wetlands**” is defined in Minn. R. 7050.0130, subp. F and includes those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in **saturated soil** conditions. **Wetlands** generally include swamps, marshes, bogs, and similar

areas. Constructed **wetlands** designed for wastewater treatment are not **waters of the state**. **Wetlands** must have the following attributes:

- a. A predominance of hydric soils;
- b. Inundated or saturated by **surface water** or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a **saturated soil** condition; and
- c. Under normal circumstances support a prevalence of such vegetation.